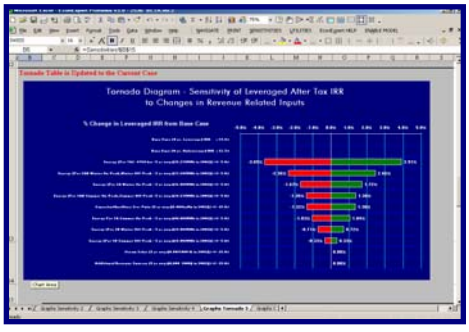
No claim is made to the exclusive right to use "EconExpert" and "A 'Universal' Financial Proforma" apart from the mark as shown.

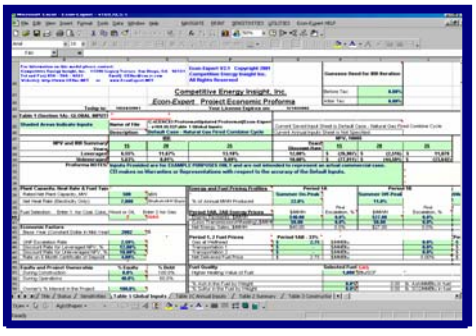
User's Manual for

EconExpert-WIND

Financial Proforma

For the Economic Evaluation and Valuation of Wind Power Projects That Sell Energy to the Power Grid





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11/15/08

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Important Notices to Users of EconExpert-WIND

Copyright Notice

The EconExpert-WIND Financial model and its accompanying documentation are protected by copyright law and international treaties. The EconExpert-WIND model, documentation, and reports generated by the model include prominently displayed Copyright Notices. Unauthorized use, modification, reverse engineering, reproduction or distribution of the EconExpert-WIND model, or any portion of it, may result in severe civil and criminal penalties and will be prosecuted to the maximum extent possible under the law.

If you are a licensed user, you are free to distribute printed reports and charts, as well as to provide others with electronic copies of EconExpert-WIND if such reports or electronic copies are generated by the EconExpert-WIND model's Command Menu and contain the Copyright Notices included with the EconExpert-WIND model. You may also provide saved electronic copies of the EconExpert-WIND model to others but such copies will not function properly on unlicensed computers unless the Authorized License Codes are provided by Competitive Energy Insight, Inc.

Changing of Your Computer's Clock

If you make changes to the setting of the clock on your computer, particularly if you set the clock backwards after you have installed EconExpert-WIND or forwards beyond the end of your authorized license period, an error will be produced when the EconExpert-WIND model is opened. While Excel can be closed and reopened normally, EconExpert-WIND will not function properly if it is reopened after such invalid clock settings have been made. If you encounter a problem related to the setting of your computer clock as it relates to EconExpert-WIND, please contact CEI to discuss measures to repair your valid installation of the model.

Use of EconExpert-WIND with Macros Enabled

In order to properly install and use EconExpert-WIND, the "Macros Enabled" option for Microsoft Excel MUST be selected. The model will not function properly without Macros Enabled.

Microsoft Excel Versions 2002 and later include a Security Setting that can prevent the user from opening spreadsheets that contain macros. If this Security Setting is set to HIGH, then you will not be permitted to open EconExpert-WIND (or any other spreadsheet) with the Macros functioning. Prior to opening EconExpert-WIND, you may want to check this setting on your version of Excel. To do so select:

Tools - Macro - Security

from the Excel Command Menu. On the Security Level Tab, the setting selection should be MEDIUM or LOW. Note also that installation of the model or extension of your license must be initiated from an .xls version of the model saved on you C: drive.

Product Warranty and Warranty Limitations

Users of EconExpert-WIND hereby indemnify Competitive Energy Insight, Inc. against any and all problems, damages, liabilities or claims, or other violation that might arise in association with any use of the EconExpert-WIND model by the Licensee. Competitive Energy Insight, Inc. makes no warranties or representations with respect to the accuracy or fitness-for-purpose with respect to the use or application of the model except that Competitive Energy Insight will make reasonable efforts to correct defects in the model after they are identified and will promptly provide paid Licensees with updates containing such corrections when they are available. These reasonable efforts to correct defects in the model do not apply to Derivative Works developed by Users of the model. CEI assumes no responsibility for or obligation relative to the performance of or defects in Microsoft Excel. EXCEPT FOR THE WARRANTIES AND REPRESENTATIONS EXPRESSLY SET FORTH HEREIN, COMPETITIVE ENERGY INSIGHT, INC. DISCLAIMS ANY AND ALL WARRANTIES AND REPRESENTATIONS, EXPRESS OR IMPLIED, WITH RESPECT TO THE MODEL AND ITS CONFORMITY TO ANY SPECIFICATIONS OR DESCRIPTION, INCLUDING WITHOUT LIMITATION ANY IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR THAT THE MODEL OR THE RESULTS THEREFROM SHALL BE ERROR FREE.

Removal of the EconExpert-WIND Menu

Under rare circumstances, the EconExpert-WIND Command Menu may not be fully removed when the model is closed. If this occurs, reopen the model without any other spreadsheets opened. Then close EconExpert-WIND and any extraneous menus will be deleted.

If you are using Excel 2007, the EconExpert Menu will appear in the "Add-Ins" Ribbon on the Vista Ribbon bar.

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I) Introduction to EconExpert-WIND and CEI

Thank you for choosing EconExpert-WIND of the family of EconExpert financial analysis tools. EconExpert-WIND is the first truly universal financial proforma for the wind power industry, designed to allow simplified or sophisticated analysis of any wind power project that sells energy to the grid, from the perspective of any stakeholder in the project or transaction. EconExpert-WIND is a sophisticated and highly flexible spreadsheet developed in Microsoft Excel®[1] and can be effectively utilized to evaluate new project development, acquisitions or divestitures from small wind farms to utility scale power projects. The model, developed by Competitive Energy Insight, Inc. (CEI) a California Corporation with offices in San Diego, has evolved since 1997 as a tool first used extensively in CEI's private consulting practice in support of Fortune 500 clients to evaluate opportunities for development or acquisition of thermal power generation projects. Now, EconExpert-WIND has been transformed into a tool that can be used efficiently and effectively by project developers, utilities, equipment suppliers, consultants, banks and others in the industry to evaluate, study, make informed decisions on, structure contracts and track the economics of wind power generation investments.

The key to EconExpert-WIND and its sister models is the architecture which allows you to study any project through the models' input sheets, specifying the conditions of ownership, procurement, construction, financing, operation and electricity sales, taxes and deal structure for virtually any project, and then to quickly study how the economic viability of that project might be impacted by changes in market conditions. Built-in menus, wizards, automated functions, sensitivities, tornado diagrams, graphics and on-line help features will further assist you in evaluating opportunities and producing reports that clearly and accurately support the conclusions you reach.

This User's Manual has been developed to assist you in getting started using EconExpert-WIND, and to provide supporting documentation in the event that questions might arise as you use it. The User's Manual is complemented by On-Line Help and an On-Line Tutorial that can be accessed directly from the EconExpert-WIND model's Command menu.

Competitive Energy Insight would greatly appreciate your feCPack and comments on EconExpert-WIND and our other software products and we are committed to both updating and improving the models to include additional functionality that is important and valuable to the energy industry.

[1] Microsoft Excel® is a registered trademark of the Microsoft Corporation.

II) How to Obtain or Extend a Subscription to EconExpert-WIND

To purchase EconExpert-WIND or to extend your license, please contact Competitive Energy Insight via email or phone. Subscription rates are available upon request. Subscribers will be provided with free software training and access to all updates issued during the term of their Software License.

All users of the EconExpert-WIND model will be required to acknowledge their acceptance of the EconExpert-WIND Software License Agreement in order to fully enable the model. Please see Section IV: Getting Started of this manual for additional information regarding the Software License. A copy of the License is included on the License Sheet in the model and in the Appendix.

If you open EconExpert when your current license is within twenty-one days of expiration, the model will notify you that your license is about to expire. The EconExpert Help Menu includes an automated feature that allows you to extend the period of a license by entering a License Extension Code which can be provided by CEI. By contacting CEI and entering the necessary codes, your license term can be extended at any time. In the event that your installation of EconExpert-WIND experiences problems, this feature may also be used to revalidate a current license.

If you forward copies of EconExpert-WIND to others who do not have an active license, CEI can temporarily enable the model as "Fully Functional" using these License Codes. If others attempt to open a model you have sent them and they are not authorized, they will be advised how to contact CEI to obtain the needed codes. Without these codes, unauthorized copies of the model will not function properly. Once the authorized codes are entered, even if the model was provided to a potential user by someone other than CEI, all copies of EconExpert-WIND will function on the authorized computer during the authorized license period.

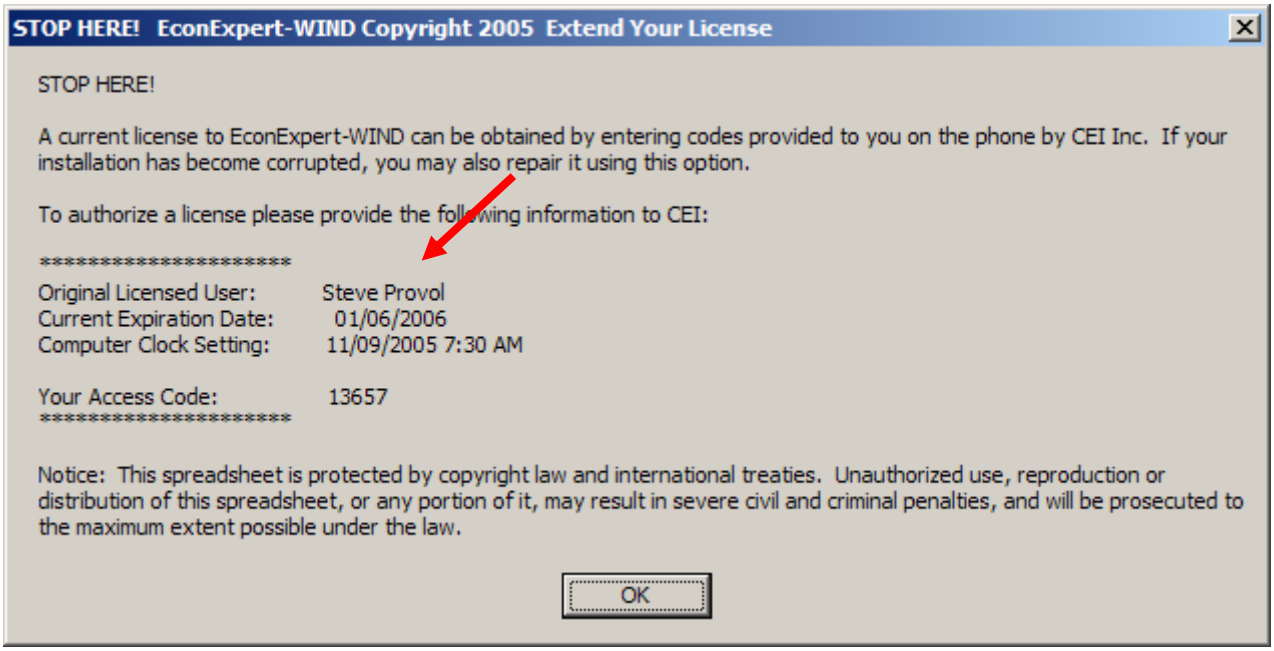
From the EconExpert-WIND Command Menu, licensed users can also create a "Values-Only" copy of the model that can be shared with others and viewed on any PC, including those that are not licensed to use the "Fully-Functional" model. In a "Values-Only" version of the model, much of the Command Menu's functionality will be preserved allowing others to easily view and print reports and charts for the specific case study that has be saved. A "Values-Only" copy will not allow users to change inputs or to evaluate any new cases. If you purchase a subscription to the EconExpert-WIND model, any copies of the model that you save as "Recoverable Values-Only" versions, can be restored to fully functional versions of the model once a license is renewed and since a "Values-Only" copy can be opened without a license, models can be permanently archived and reopened in this manner.

The Initial Installation File you receive from CEI will only enable the use of the model for a limited period, usually ~10 days. If you have purchased an extended period license to use the EconExpert-WIND model, contact CEI after performing your initial installation. CEI will provide you with the necessary License Extension Codes to fully enable your use of the model for the subscribed license period. To access the License Enable / License Extension feature, first contact CEI by telephone and then from the UTILTIES menu select:

Extend my License **Enable or Extend my EconExpert-WIND License**

Next, the following screen will appear:

Figure 1 - How to Obtain an Authorized Subscription to EconExpert-WIND


STOP HERE! EconExpert-WIND Copyright 2005 Extend Your License
STOP HERE!
A current license to EconExpert-WIND can be obtained by entering codes provided to you on the phone by CEI Inc. If your installation has become corrupted, you may also repair it using this option.
To authorize a license please provide the following information to CEI:
****
Original Licensed User: Steve Provol
Current Expiration Date: 01/06/2006
Computer Clock Setting: 11/09/2005 7:30 AM
Your Access Code: 13657
****
Notice: This spreadsheet is protected by copyright law and international treaties. Unauthorized use, reproduction or distribution of this spreadsheet, or any portion of it, may result in severe civil and criminal penalties, and will be prosecuted to the maximum extent possible under the law.
OK

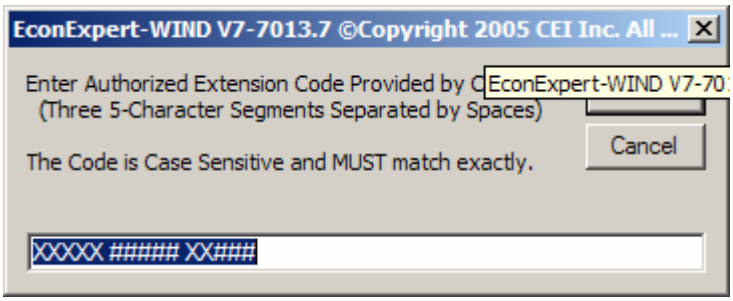
Provide the information on the screen to CEI. We will use this information to provide you with the necessary License Extension Codes over the phone, which are specific to your system. Select OK and the following screen will appear:

Figure 2 - License Authorization Screen Yes/No

Econ-Expert LICENSE AUTHORIZATION
Do you want to continue by entering the Authorized License Extension Code provided to you by CEI?
Yes
No

If you have contacted CEI to obtain the Extension Code select YES. You will then be prompted by the following screen:

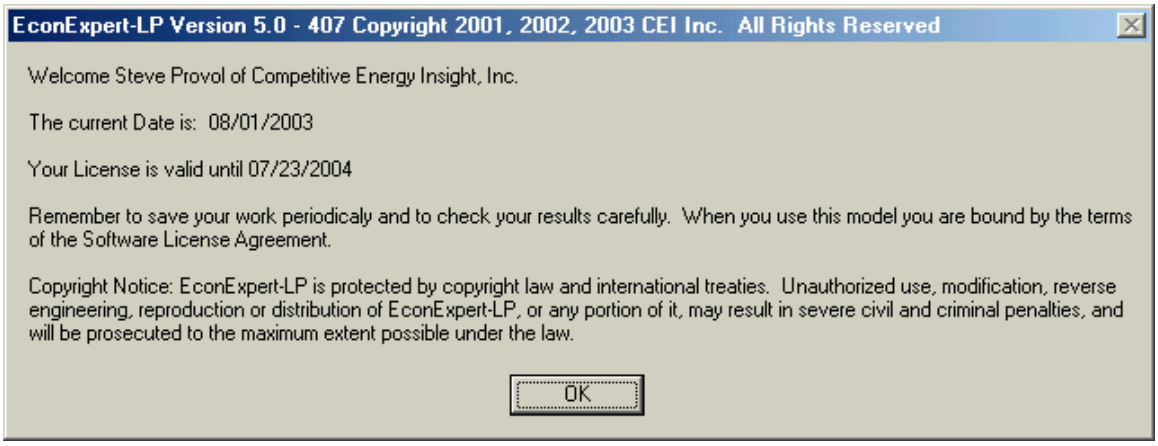
Figure 3 - Extension Code Screen


EconExpert-WIND V7-7013.7 ©Copyright 2005 CEI Inc. All ...
Enter Authorized Extension Code Provided by C
EconExpert-WIND V7-70
(Three 5-Character Segments Separated by Spaces)
The Code is Case Sensitive and MUST match exactly.
Cancel
XXXXX ##### XX###

Enter the 15 character code provided to you by CEI. The License Extension Code is comprised of three sets of 5-Character Case Sensitive Segments, each separated by a single space. THE CODE IS **CASE SENSITIVIVE** AND MUST MATCH THE AUTHORIZED CODE EXACTLY. IF IT DOES NOT MATCH, YOU WILL BE PROMPTED UP TO 3 TIMES FOR THE CORRECT CODE. After the correct code is entered you will be asked to enter your User Name, usually your First Name and Last Name. The User Name that you enter must be at least 8 characters long. The name you enter will appear on the Program Greeting each time you open EconExpert-WIND. After entering your name, enter the name of your Company. This Company Name will appear on all printed reports generated by the model.

Next, you will then see the following greeting acknowledging successful extension of the license.

Figure 4 - EconExpert-WIND Greeting Screen


EconExpert-LP Version 5.0 - 407 Copyright 2001, 2002, 2003 CEI Inc. All Rights Reserved
Welcome Steve Provol of Competitive Energy Insight, Inc.
The current Date is: 08/01/2003
Your License is valid until 07/23/2004
Remember to save your work periodicaly and to check your results carefully. When you use this model you are bound by the terms of the Software License Agreement.
Copyright Notice: EconExpert-LP is protected by copyright law and international treaties. Unauthorized use, modification, reverse engineering, reproduction or distribution of EconExpert-LP, or any portion of it, may result in severe civil and criminal penalties, and will be prosecuted to the maximum extent possible under the law.
OK

Select OK and EconExpert-WIND will initialize and be ready for use. Other previously saved copies of EconExpert-WIND should perform normally during the new license term.

III) System Requirements

EconExpert-WIND is a Microsoft Excel® spreadsheet that has been complemented with sophisticated Visual Basic macros to add flexibility and functionality. While the spreadsheet will work effectively with a wide variety of computer hardware, operating systems and versions of Microsoft Excel, the following minimum system requirements are recommended:

Hardware

- 512 MB or more of Random Access Memory (RAM).
- To print very large (multiple-table) reports from the model, it is recommended that you have your system configured with at least 2MB of printer spooling memory. This can be as network or computer RAM or as a memory module on the printer.
- A graphics-capable display with setting of at least 800 x 600 Pixels and preferably 1024 x 768 Pixels.
- A graphics-capable printer.
- At least 15MB of available storage on you **C:** hard drive. This memory is needed for the initial installation only. After the installation is completed, the model can be saved and operated on the installed PC from any local or network drive.

Software

- Windows XP, Windows Vista or later Operating Systems.
- Microsoft Excel 2002, 2003, 2007, Office Vista, Office XP or later
- Winzip®[2] or the equivalent for decompressing the original files. Note that if requested the EconExpert-WIND model and documentation can be provided as self-extracting .exe files that will not require the installation or use of WinZip to decompress the files. The model is not conventionally delivered this way as many network administrators will not allow .exe files as attachments to emails.

It should be noted that while use of the EconExpert-WIND software has been successfully demonstrated with the listed systems, the configuration of individual systems or networks might be a factor in the successful installation of this software. If problems arise, please contact CEI.

[2] WinZip is a registered trademark of WinZip Computing, Inc.

IV) Getting Started - Installing EconExpert-WIND

For licensed users of EconExpert, a file will be provided to you by email or can be downloaded (with approval codes) from our website. Note that the installation of the model MUST be initiated from your C: drive and the installation file MUST NOT have the READ ONLY attribute selected. The original file provided to you will be:

- EconExpert-WIND Installation File V.xxx [Your Name] [Your Company].Zip
  Installation Copies should ONLY be provided by CEI Inc. and under the terms of the License Agreement, you are NOT permitted to provide your Installation Copy of the model to others. You will only need to open this file one time as an installed copy of the model will be saved you're the directory C:\EconExpert Files\ which the model will automatically add to your C: Drive.

- EconExpert-WIND Users Manual V.xxx.PDF
  This is the User's Manual that can be downloaded from the CEI website (www.CEInsight.com) as an Acrobat PDF file which can be viewed and printed using Adobe Acrobat.

It is possible that you received a previously installed copy of EconExpert-WIND from another user, and that you would like to enable that copy of the model using License Codes provided by CEI. If this is the case, please refer to Section 2 on Page 10 of the User's Manual for instructions on how to enable a previously installed model on a new user's computer.

Installation files are compressed using WinZip, a utility that compresses files for more efficient saving and transport via email. To view the User's Manual or to install EconExpert-WIND, you must first decompress the files. If you already own WinZip, to unzip EconExpert please following these steps:

Step 1:

Copy the original .Zip (or .Exe files) to any location and folder on your C:/ drive. Installation of the model MUST be initiated from your C: drive.

- If you have received .Zip files from CEI, and have previously installed WinZip, using My Computer or Windows Explorer locate the directory where you copied the files and right click on the .Zip files. To expand the files, select the WinZip option:

  Extract to Here

  Or extract the model to an alternate folder of your preference.

- If you have received an .exe (auto extracting) file from CEI or the CEI Website, using My Computer or Windows Explorer locate the directory where you saved the files and double click on them to initiate unzipping the files.

The Initial Installation File you receive from CEI will only enable the use of the model for a limited period, usually ~10 days. If you have purchased an extended period license to use the EconExpert-CP model, CEI will provide you with the necessary authorization codes to fully enable your use of the model for the subscribed license period.

Step 2:

Start Microsoft Excel and use the File-Open command on the Excel Command Menu to select EconExpert-CP *Installation File V.xxx.xls* from the directory where the Installation File has been added.

Excel 2002, 2003

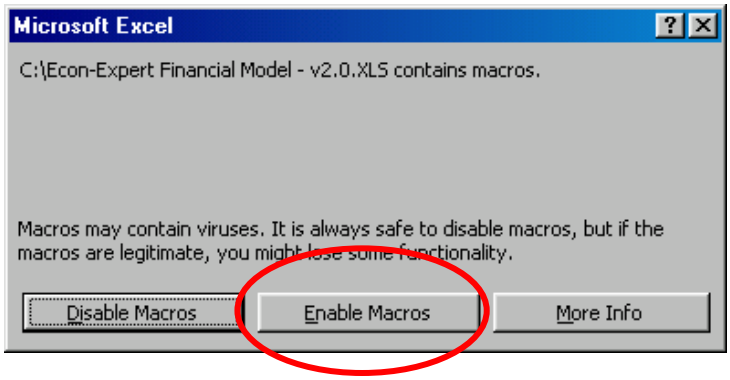
IMPORTANT NOTE: EconExpert-CP must be run with Macros Enabled. Microsoft Excel Versions 2002 and later include a Security Setting that can prevent the user from opening spreadsheets that contain macros. If this Security is set to HIGH, then you will not be permitted to open EconExpert-CP with Macros Enabled. Prior to opening EconExpert-CP, you may want to check this setting on your version of Excel. To do so select:

Tools - Macro - Security

from the Excel Command Menu. On the Security Level Tab, the settings selection should be MEDIUM or LOW. The MEDIUM Setting will continue to provide you with the warning message concerning spreadsheets that contain macros.

Also, it is recommended that no other worksheets be opened when you are installing EconExpert-CP. If your security level setting is set to Medium as discussed above, Microsoft Excel will now provide you with a warning which is similar to:

Figure 5 - Microsoft Excel Enable Macros Screen


Microsoft Excel
C:\Econ-Expert Financial Model - v2.0.XLS contains macros.
Macros may contain viruses. It is always safe to disable macros, but if the macros are legitimate, you might lose some functionality.
Disable Macros
Enable Macros
More Info

Excel 2007

If you are using Excel 2007, in order to properly access EconExpert please do the following

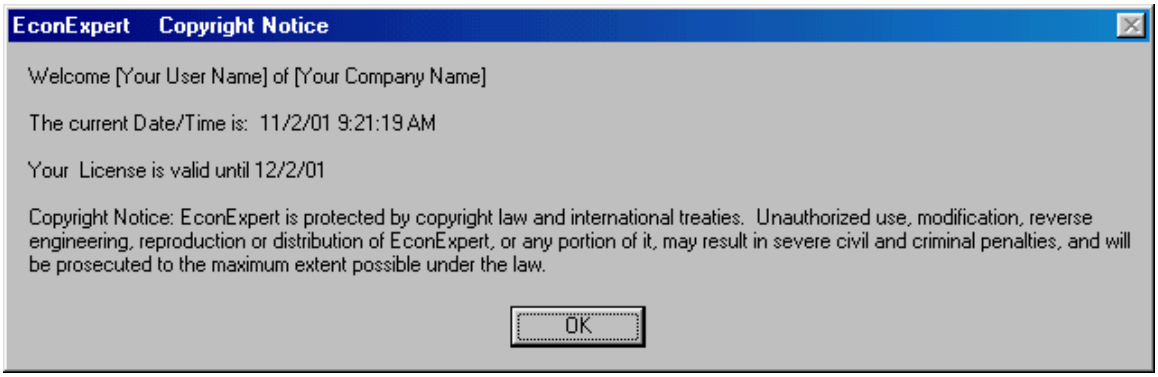
1. Before opening EconExpert, Open Excel and select the **Office Button** on the top left corner of your screen.
2. From the Office Dialogue box select the button labeled Excel Options on the bottom right of the dialogue box
3. On the General Tab click on the Checkbox labeled “Show Developer Tab on the Ribbon”
4. Open EconExpert.
5. When the model is opened select “Options” and “Enable Content” to allow EconExpert’s macros to run.

Whenever you open EconExpert you MUST authorize macros to run. If this option is not selected, the model will not function!

Step 3:

The installation of EconExpert-CP will proceed. EconExpert-CP will be saved to your C:\ Drive in the folder C:\EconExpert Files. Settings for use of the model will be initiated. Next the following screen will appear:

Figure 6 - EconExpert-CP Copyright Notice Screen


EconExpert Copyright Notice
Welcome [Your User Name] of [Your Company Name]
The current Date/Time is: 11/2/01 9:21:19 AM
Your License is valid until 12/2/01
Copyright Notice: EconExpert is protected by copyright law and international treaties. Unauthorized use, modification, reverse engineering, reproduction or distribution of EconExpert, or any portion of it, may result in severe civil and criminal penalties, and will be prosecuted to the maximum extent possible under the law.
OK

Please read this Copyright Notice carefully. Note that this screen will also advise you of the current date and on what date your license to use the software will expire.

Select OK again and you will see a notice about providing copies of EconExpert-CP to others. Also note that the Recalculation Feature on Excel will be set to Automatic. This is the recommended setting for EconExpert-CP though if you prefer you can later reset the recalculation setting to Manual using the:

Tools Options Recalculation

option on the Excel Command Menu. If you set recalculation to Manual, it will be necessary for you to press F9 (Calculate) to re-enable EconExpert-CP following saving the model, as discussed below.

Select OK and EconExpert-CP will be initialized. In the upper left-hand corner of the spreadsheet, the message will appear:

EconExpert-CP is Initializing Please Wait

The Initialization Procedure will occur every time that you open the model. EconExpert-CP will automatically check its setup to ensure that all of its internal settings are set correctly when you start work.

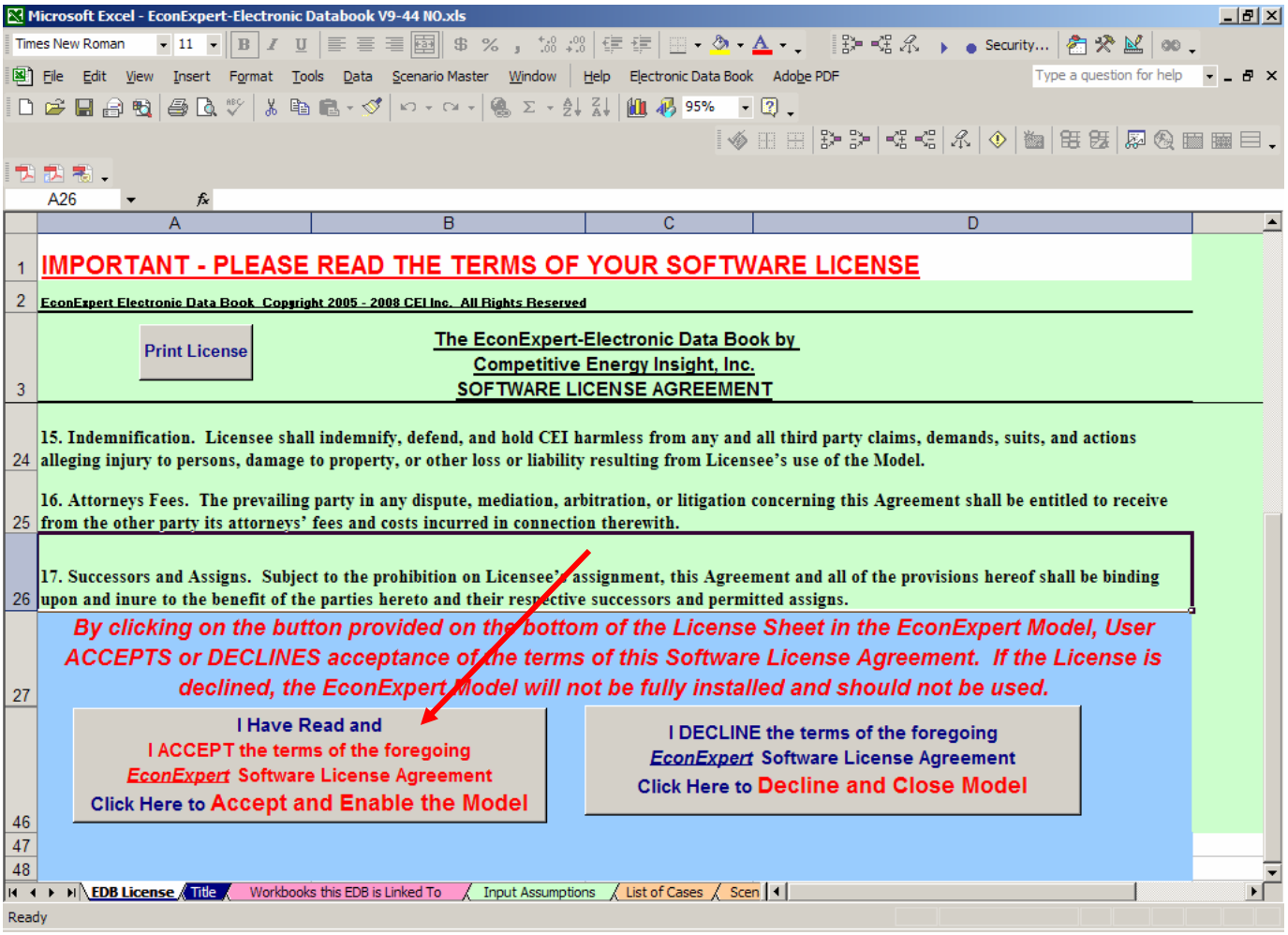
Step 4:

Finally another important message advising you that prior to using the model you must acknowledge that you accept the terms of the Software License Agreement. This is required to enable EconExpert-CP's calculations.

You will be required to acknowledge your Agreement with the Software License each time you install the model on an Authorized Computer and each time you renew your license to the model. The EconExpert-CP Software License is presented. If desired, you may print the license by clicking on either of the Print License buttons at the top of the Screen. If you read the license on your monitor, be sure to scroll down the screen and read ALL of the applicable license terms. A copy of the EconExpert-CP Software License is also included in the Appendix to this User's Manual.

Step 5:

At the conclusion of the Software License, you will be provided with the option to ACCEPT or DECLINE the EconExpert-CP Software License Agreement. READ THIS LICENSE CAREFULLY as by accepting it you will be legally bound to its conditions. PLEASE NOTE THAT THE MODEL WILL NOT FUNCTION PROPERLY UNLESS YOU CHOOSE TO ACCEPT THE AGREEMENT!


Microsoft Excel - EconExpert-Electronic Databook V9-44 N0.xls
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SOFTWARE LICENSE AGREEMENT
15. Indemnification. Licensee shall indemnify, defend, and hold CEI harmless from any and all third party claims, demands, suits, and actions alleging injury to persons, damage to property, or other loss or liability resulting from Licensee's use of the Model.
16. Attorneys Fees. The prevailing party in any dispute, mediation, arbitration, or litigation concerning this Agreement shall be entitled to receive from the other party its attorneys' fees and costs incurred in connection therewith.
17. Successors and Assigns. Subject to the prohibition on Licensee's assignment, this Agreement and all of the provisions hereof shall be binding upon and inure to the benefit of the parties hereto and their respective successors and permitted assigns.
By clicking on the button provided on the bottom of the License Sheet in the EconExpert Model, User ACCEPTS or DECLINES acceptance of the terms of this Software License Agreement. If the License is declined, the EconExpert Model will not be fully installed and should not be used.
I Have Read and
I ACCEPT the terms of the foregoing
EconExpert Software License Agreement
Click Here to Accept and Enable the Model
I DECLINE the terms of the foregoing
EconExpert Software License Agreement
Click Here to Decline and Close Model
EDB License
Title
Workbooks this EDB is Linked To
Input Assumptions
List of Cases
Ready

After selecting this button, select OK on the next pop-up and the model will again be saved to a new directory named:

C:\EconExpert Files

Step 6:

Next you will receive a message that the installation has been completed and if applicable you will be asked if you would like to view the EconExpert-CP Tutorial. Select YES if you would like to view the Tutorial, which is highly recommended for new users and it will take about 15 - 20 minutes. If you elect not to view the Tutorial at this time, it can be accessed later from the EconExpert Help option on the Command Menu.

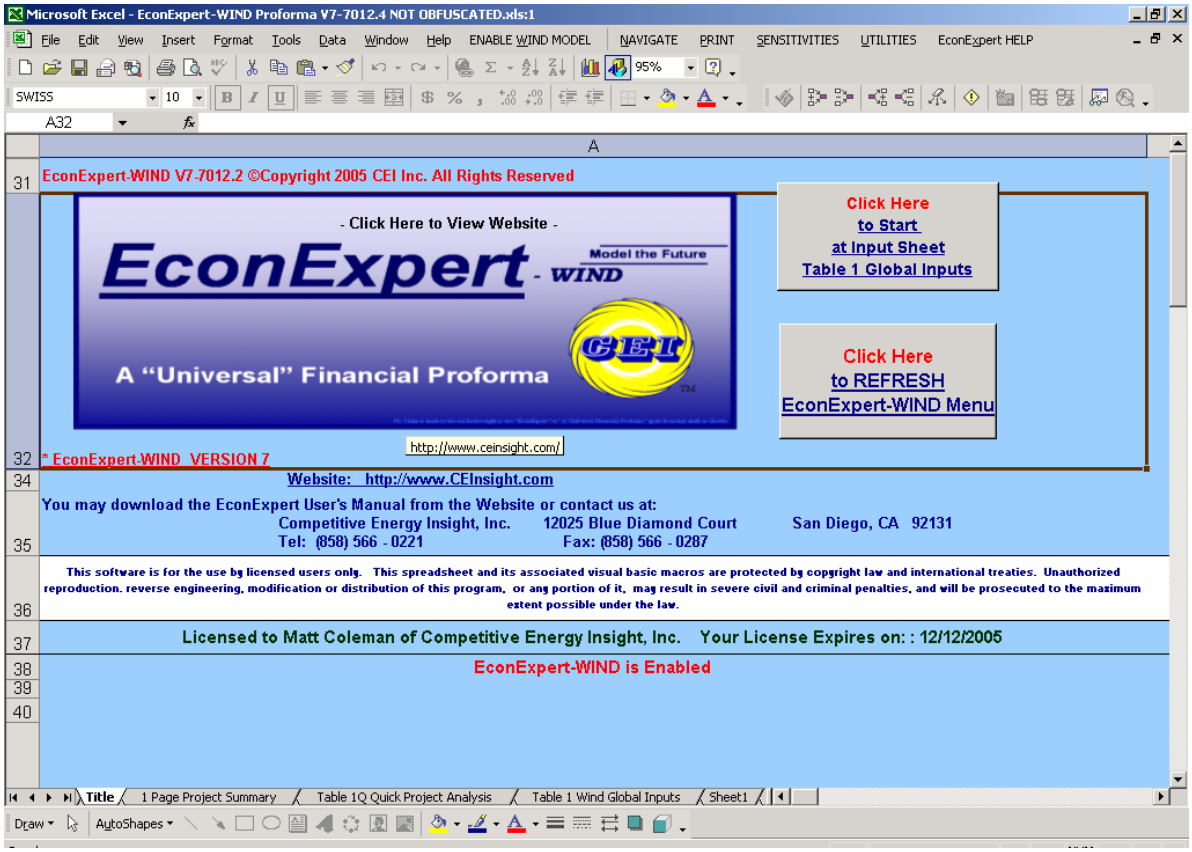
The EconExpert-CP will also prompt you with a screen indicating which other workbooks the model is linked to, as applicable. If you are opening a fresh copy of the CP, the model will indicate that it is not currently linked to any other workbooks.

Step 7:

The model has been fully initialized and is ready for use. All copies of EconExpert-CP models that you save will be "Fully Functional" on Licensed Computers used by you or others, during the applicable License Period for that user. Note that copies of the spreadsheet will not work properly on computers that do not have licensed authorized installations. If you forward copies of the model to others who do not have an active license, or you try to use the model on another computer, that copy of the model can be enabled by obtaining the appropriate License Authorization Codes from CEI. Once entered, the codes will fully enable the use of EconExpert-CP on that computer for the subject license period.

You will now be transferred to the EconExpert-CP Title Screen.

Figure 4 - The EconExpert-WIND Title Screen


Microsoft Excel - EconExpert-WIND Proforma V7-7012.4 NOT OBFUSCATED.xls:1
EconExpert-WIND V7-7012.2 ©Copyright 2005 CEI Inc. All Rights Reserved
- Click Here to View Website -
EconExpert - WIND
Model the Future
A "Universal" Financial Proforma
Click Here to Start at Input Sheet Table 1 Global Inputs
Click Here to REFRESH EconExpert-WIND Menu
* EconExpert-WIND VERSION 7
Website: http://www.CEInsight.com
You may download the EconExpert User's Manual from the Website or contact us at:
Competitive Energy Insight, Inc. 12025 Blue Diamond Court San Diego, CA 92131
Tel: (858) 566 - 0221 Fax: (858) 566 - 0287
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Licensed to Matt Coleman of Competitive Energy Insight, Inc. Your License Expires on: : 12/12/2005
EconExpert-WIND is Enabled

Step 8:

With the EconExpert-WIND Command Menu at the top of the screen, you are now ready to model your wind project! To begin, select the **Click Here** button, use the Navigate menu item, or page through the tabs at the bottom of the spreadsheet. Note that after saving the model, the Div!/0 notation will appear throughout the model. To enable EconExpert-WIND, select:

ENABLE MODEL Enable EconExpert-WIND

See IX) for more information.

Congratulations! You are now ready to use EconExpert-WIND!

Final note: If the Display Setting in Windows is set to other than the recommended setting of 1024 x 768 pixels, a notice will appear during the installation, giving you the option to reset the display settings in Windows or to modify the Zoom settings in EconExpert-WIND from the default. The Zoom setting can also be automatically reset by selecting:

UTILITIES Table Viewing Format Set Table Zoom [Setting]

on the EconExpert-WIND Command Menu.

V) The EconExpert-WIND On-Line Tutorial

EconExpert-WIND includes an On-Line Tutorial that will guide you through the important features of the model. After accepting the terms of the EconExpert-WIND License Agreement, you will be asked if you would like to view the Tutorial. The Tutorial may also be viewed at any time by selecting the Tutorial Option from the EconExpert Help Menu. It is highly recommended that new users review the tutorial and the examples in the Appendix to this User's Manual.

The Tutorial is broken down into the following sections:

- Overview
- Command Menus
- Help Features
- Worksheet Tabs and Tables in the Model
- Customizing the Model
- Information on How to Extend Your License to Use the Model

At the beginning of each section you will have the option to skip forward to a later section.

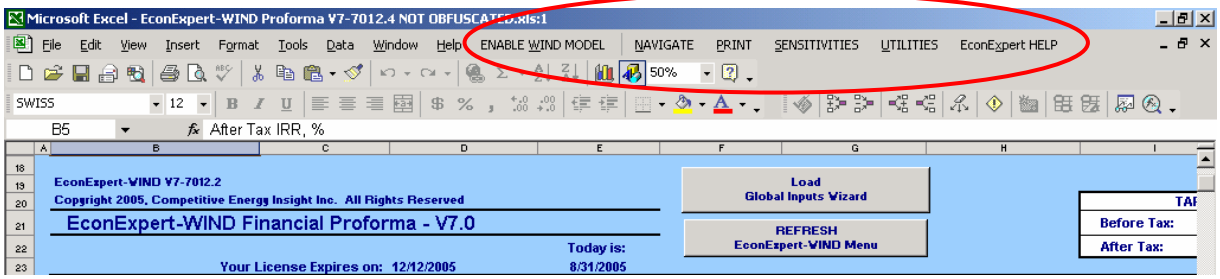
VI) The EconExpert-WIND Command Menu

EconExpert-WIND includes a Custom Command Menu that in Excel 2002 and alter appears on the Excel Menu Bar to the right of or below the Excel's menu Help Option. In Excel 2007 the Custom Command Menu appears under the "**Add-Ins**" option on the Excel 2007 ribbon. The EconExpert-WIND Command Menu provides you with control of the EconExpert-WIND model's special functions and On-Line Help Features. The menu will be added to the Excel Menu bar each time that you open the EconExpert-WIND model and will be deleted each time you close it. If you become locked up in Windows when EconExpert-WIND is opened, it is possible that the menu will appear when you reopen Excel even if EconExpert is not opened. To delete the extraneous menu simply reopen and then close the model.

If you are using Excel 2007, the EconExpert Menu will appear in the "Add-Ins" Ribbon on the Vista Ribbon bar.

The Command Menu appears at the top of the EconExpert-WIND screen as shown below: The various options in the Command Menu are described following the Figure.

Figure 5 - The EconExpert-WIND Command Menu


Microsoft Excel - EconExpert-WIND Proforma V7-7012.4 NOT OBFUSCATED.xls:1
File Edit View Insert Format Tools Data Window Help ENABLE WIND MODEL NAVIGATE PRINT SENSITIVITIES UTILITIES EconExpert HELP
B5 After Tax IRR, %
EconExpert-WIND V7-7012.2
Copyright 2005, Competitive Energy Insight Inc. All Rights Reserved
EconExpert-WIND Financial Proforma - V7.0
Your License Expires on: 12/12/2005
Today is: 8/31/2005
Load Global Inputs Wizard
REFRESH EconExpert-WIND Menu
Before Tax:
After Tax:

The six options provided on the EconExpert-WIND Command Menu are listed below. To select any of them click on the desired option, or hold down the Alt key and select the underlined character:

- ✓ ENABLE WIND MODEL
- ✓ NAVIGATE
- ✓ PRINT
- ✓ SENSITIVITIES
- ✓ UTILITIES
- ✓ EconExpert HELP

A) NAVIGATE

As an alternative to selecting from the worksheet tabs (located on the bottom of the Excel Screen), the NAVIGATE Menu provides you with another means for locating and viewing the specific inputs, and various tables and charts, in the EconExpert-WIND model. Options provided on this menu include:

- Top Quick Analysis Sheet – The Quick Analysis Sheet is an input sheet for simple deal screening and project economic analysis.
- Wind Global Inputs - Table 1 - To locate specific input categories, select from the sub-menu a list of the Input Categories that are located on Table 1 Wind Global Inputs. Inputs on this sheet typically apply over the life of the project or are entered as a single value and then escalated at a constant rate.

- Annual Inputs - Table 1C - The Wind Annual Inputs Table is an optional table used to refine the setup that you have developed using Table 1 Wind Global Inputs. To locate specific input categories, select from the sub-menu a list of Input Categories used in Table 1C Annual Inputs. Annual Inputs are inputs that apply in a single year during the life of the project. When entered, non-zero inputs or results generated using formulas in the Annual Inputs Table will override or will be added to results otherwise calculated using the corresponding Global Input.
- Partner Return Sheet – Table 1P – The Navigation sub-menu options take you to the different inputs and calculations specifically for modeling partnership accounting and returns. Note that in more recent versions of EconExpert-WIND, partnership analysis is performed in a separate module.
- Data Conversion – Table 1D - Select from a list of Input Categories used in the Data Conversion Sheet. The Data Conversion Sheet allows you to enter forward pricing data in up to 24 block periods/year and then to convert that data to an equivalent annual format for use in EconExpert-WIND.

- Summaries – There are two summary tables, a comparison sheet, and the status sheet that can access via this Navigate menu option.
- Current Case Graphs - Select to view and edit the various graphs generated by EconExpert-WIND for the current case that you have set up in the model.
- Project Valuation Graphs – The graphs associated with the valuation of a project or asset based on the target Internal Rate of Return (IRR) that a 'for-profit' investor would target to achieve. Navigation to the results in tabular format is described below.
- Sensitivity Graphs – The graphs that are produced from the many sensitivity options. Navigation to the results in tabular format is described below.
- Tornado Diagrams - Select to view the tables and graphs produced by EconExpert-WIND that are used to generate the Tornado Diagrams. Navigation to the results in tabular format is described below.
- Results Tables - Select from a list of various Results Tables produced by the model. The Results Tables are also identified by the Worksheet Tabs shown at the bottom of the Excel screen.
- Tornado Tables - Select to view the tables and graphs produced by EconExpert-WIND that are used to generate the Tornado Diagrams. Navigation to the results in graphical format is described above.
- Project Valuation Tables - The tables associated with the valuation of a project or asset based on the target Internal Rate of Return (IRR) that a 'for-profit' investor would target to achieve. Navigation to the results in graphical format is described above.
- Sensitivity Tables – The tables that are produced from the many sensitivity options. Navigation to the results in graphical format is described above.

B) PRINT

The PRINT Menu provides you with options for printing Tables and Graphs generated by the EconExpert-WIND model. Tables and graphs in the model can be generated in multiple formats, with options to print tables selectively or in various levels of summary detail.

If desired, you can also create your own custom reports using the Excel options:

File Page Setup or **File Print**

Please note that the EconExpert-WIND Software License Agreement requires that you include the copyright Notice on any printed reports that you create.

Options on the PRINT menu include:

- Compress Rows that Have No Data - This features hides any rows that are blank, eliminating rows are not relevant to your reports

- Tables - LETTER (8 ½ x 11 in.) Paper - Select this option to print the first 24 months of the Construction Period results or the first 20 years of the Operating Period Results to letter sized paper. Note that Excel must be pointed to a printer with letter paper in the selected paper tray.
- Tables - LEGAL Paper (8 ½ x 14 in.) - Select this option to print the first 36 months of the Construction Period results or the first 30 years of the Operating Period results to legal sized paper. Note that Excel must be pointed to a printer with legal paper in the selected paper tray.
- Tables – Tabloid Paper (11 x 17 in.) - Select this option to print the first 36 months of the Construction Period results or the first 30 years of the Operating Period results to 11 x 17 in. paper. This is the largest format printout. Note that Excel must be pointed to a printer with tabloid paper in the selected paper tray.
- Tables – A4 Paper - Select this option to print the first 24 months of the Construction Period results or the first 20 years of the Operating Period results to European Style A4 Paper.

- Current Case Graphs - Select this button to print the various graphs provided under the Worksheet Tabs Graphs 4, 5 and 6. These graphs show results for the current case. Results will be printed to Letter Sized paper.
- Project Valuation Graphs - Print the selected graphs that are included on the Sensitivities Sheet.
- Sensitivity Graphs - Print the selected graphs that are included on the Sensitivities Sheet.

  Note that all graphs can be printed by unprotecting the graphs sheet, selecting the graph and selecting the print icon on the Excel menu bar.

- Tornado Tables - Print the Tables that are generated each time you create a Tornado Diagram from the SENSITIVITIES Menu.
- Tornado Diagrams - Print the Charts that are generated each time you create a Tornado Diagram from the SENSITIVITIES Menu.
- Project Valuation Tables - Print the selected tables that are included on the Sensitivities Sheet.
- Sensitivity Tables - Print the selected tables that are included on the Sensitivities Sheet.

C) SENSITIVITIES

In the most recent versions of EconExpert-Wind, the sensitivity charts are included in a separate file.

The SENSITIVITIES Menu provides you with options to perform special calculations including the calculation of the annual Project Rate Base and the Project Valuation, and to study how the Project Valuation, Net Present Value or Internal Rate of Return of the current case will be impacted by incrementing key inputs to the model. The Sensitivities are performed by varying the identified inputs over the life of the project.

Because graphs take up a lot of memory in Excel, there is only an IRR or NPV version of each graph in the model. To change the project return metric for a chart:

1. Choose Tools – Protection – Unprotect Sheet from the Command Menu
2. Right Click on the chart
3. Select Source Data

4. Trace the data back to the Sensitivities tab
5. Re-link the graph to the data that you want to see (e.g. from NPV to IRR)
6. Change the chart titles

Options on the SENSITIVITY menu include:

- Project Valuation Calculations - EconExpert-WIND includes an automated feature that allows you to calculate the valuation of a project based on the target IRR or NPV that an investor would target to achieve. The valuation of the project can be determined based on a target leveraged or unleveraged investment scenario. EconExpert-WIND will report the change in valuation from the base case and the net project valuation exclusive of the investor's development and soft costs.

- Project Valuation Sensitivities - After identifying the project valuation, you can perform automated sensitivities analysis to determine how changes in electricity prices would impact that valuation.

- Tornado Diagrams - Tornado Diagrams illustrate how the NPV or IRR of the current case will be impacted by individually incrementing multiple inputs. Each Tornado Diagrams is generated by varying the inputs over the life of the project, based on inputs to either Table 1 or Table 1C.

- Individual Sensitivity Cases - The remaining options allow you to selectively run individual Sensitivities listed in a subsequent chapter. The individual Sensitivity Tables and Graphs can be viewed from the Navigate menu or printed from the PRINT Menu.

- Wind Rating Profiles – This unique sensitivity is only valid if the user has entered multiple values in the Wind Rating Profile section on Table 1. This sensitivity will calculate the project returns based on each value entered in the Wind Rating Profile, determining the economic impact of the various generations for each wind rating entered.

- Run All Sensitivity Cases. You can run all of the programmed sensitivities in a single batch, updating all of the corresponding graphs and printing them if desired. This selection will take some time to execute if selected. It is highly recommended that you run all of the Sensitivity Cases prior to creating a "Values-Only" copy of the model, to ensure that all of the Sensitivities are updated to match the current "Values-Only" case.

For additional information on using EconExpert-WIND's Automated Sensitivities and Tornado Diagrams, see the Sensitivities section later in this manual.

D) UTILITIES

The UTILITIES Menu provides useful tools to manage the model. Features on the UTILITIES Menu include:

1) Show "Pop-Up" Project Metrics

These summaries are convenient pop-up reports that show:

- Before Tax Returns
- After Tax Returns

- Partner Returns
- Development Costs
- Installation Costs
- Revenues
- Operating Expenses
- Debt Service
- Project Cash Flow

To close the summary simply click on the 'X' box on the top right of the form.

2) Load Global Inputs Wizard

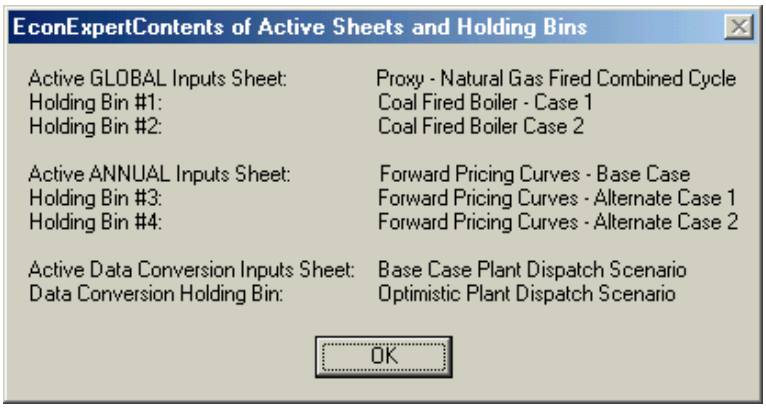
The Global Inputs Wizard will walk you through each section of Table 1 Wind Global Inputs, and allow you to directly jump to any section. Each section has its own print area which is also access from the Wizard.

3) Save, Exchange or Restore Inputs

This feature allows you to store the input sheets to "Holding Bins" and then to later recall those input sheets. Using this feature, you can run multiple scenarios in the same spreadsheet. The menu also allows you to load the default cases that are documented in the Appendix to this User's Manual. You can also reset/clear any Inputs Sheet, and the Custom Construction Drawdown Schedule. Options under Save or Reset Inputs include:

Display Contents of Active Inputs and Holding Bins. This option allows you to view the contents of the various Holding Bins described below. Note that the contents of the Global and Annual Input Sheet Holding Bins are also displayed at the top of Table 1 - Global Inputs. The Holding Bins are used to store copies of the input sheets. Whenever you file a copy of an Input Sheet to a Holding Bin, you will be prompted to name the sheet you are saving. That name will appear in the description cell located at the top of each sheet and will appear in the window that is generated when you select this option. An example of the window that EconExpert-WIND creates to inform you about the current contents of the Holding Bins is provided below:

Figure 6 - Example Display of Current Contents of Holding Bins


EconExpertContents of Active Sheets and Holding Bins
Active GLOBAL Inputs Sheet:
Proxy - Natural Gas Fired Combined Cycle
Holding Bin #1:
Coal Fired Boiler - Case 1
Holding Bin #2:
Coal Fired Boiler Case 2
Active ANNUAL Inputs Sheet:
Forward Pricing Curves - Base Case
Holding Bin #3:
Forward Pricing Curves - Alternate Case 1
Holding Bin #4:
Forward Pricing Curves - Alternate Case 2
Active Data Conversion Inputs Sheet:
Base Case Plant Dispatch Scenario
Data Conversion Holding Bin:
Optimistic Plant Dispatch Scenario
OK

Clear all Holding Bins. Select this to start a completely new case.

For each of the five input sheets you will have the following four options:

- SAVE a copy of the active Input Table to a Holding Bin. When you SAVE the contents to the Holding Bin, the current contents of the Holding Bin are overwritten.

- EXCHANGE a copy of the active Input Table with a copy saved in the Holding Bin. This option allows you to flip the copies of input tables that have been previously saved with the active Input Sheet. When you EXCHANGE the contents with a Holding Bin, the current contents of the active Input Sheet are saved in the Holding Bin and the current contents of the Holding Bin are written to the active Input Sheet. Neither is lost.

- RESTORE a copy of Input Table that had been previously saved to a Holding Bin. This option allows you to recover the copy of input table that had been previously saved. When you RESTORE the contents from a Holding Bin, the current contents of the active Input Sheet are overwritten.

- CLEAR the Input sheet. This option clears the Inputs Sheet of virtually all inputs allowing you to restart with a fresh analysis.

In addition to processing the Global, Annual and Data Conversion Sheets, this menu also allows you to:

- CLEAR the Custom Construction Drawdown and Debt-Equity Schedules. Any inputs to a custom drawdown and debt equity schedules will be cleared and the default S-Curve Drawdown that EconExpert-WIND automatically calculates to match your construction period will be restored.

- Preloaded Input Cases. This option resets the model the initial configuration with some preset values.

4) Table Viewing and Formatting

Selecting this option will allow you to change the format of the Tables in the model. The options include:

- Freeze and Unfreeze Panes. Freezing titles allows you to set the header rows and columns of all tables in the model so that the row and column titles will remain on the screen as you scroll down or across the individual tables. You can also unfreeze the titles for all tables in the model.

- Because most of the worksheets in EconExpert-WIND are protected, you will not be able to change the cell formats from the Excel menu, but this option has been added to the UTILITIES Menu, allowing you to change the format of selected cells in the model. You can selectively change the number format, shading, font color, font type, underline, borders or column width of tables and cells in the model. The following options allow you to change the cell formats:

- Number Format
- Underline, Bold and Italics
- Font Color
- Borders
- Change Column Width

- Shading. You can toggle the format of Inputs Cells in Tables 1 and 1C between **Shaded** and ***Bold Italics***. The default status of unprotected Input Cells in Tables 1 and 1C is **Shaded**, allowing you to easily differentiate between protected formula cells and unprotected input cells in the model. Since shaded entries may be difficult to read if they are copied or faxed, you can use this option to select the preferred format.

- Restore Original Formats to Input Tables. No matter what changes you make to the Input Tables, you can always select this option to restore the model to its initial formats.

- Zoom Settings. EconExpert-WIND is equipped with a Command Menu module that allows you to optimize the appearance of the model on your computer monitor based on the Windows Display Settings that you have selected and the type of monitor that you have. The basic Zoom formats in EconExpert-WIND are 40%, 50%, 75% or 100%, though when selecting each of these settings some worksheets may be formatted to a slightly different Zoom Setting for optimal appearance. Note that for the recommended Windows Display setting of 1024 x 767 Pixels, 50% is the recommended Zoom format EconExpert-WIND. If you have a lower resolution monitor and use a setting of 800 x 600 Pixels, the recommended Zoom Setting in EconExpert-WIND is 40%. You can check your Windows Display Settings in Windows by selecting:

  Start Settings Control Panel Display Settings

  Zoom settings of 75% and 100% are also provided in the event that you would prefer to see a larger print format. This might be desirable if you are displaying results using a digital projector.

  To change the Zoom Setting from EconExpert-WIND select:

  UTILITIES Table Viewing and Format Set Table Zoom

5) Formula Auditing

Because the sheets in EconExpert-WIND are protected, you will not be able to use the Audit feature on the Excel Tools menu. By double clicking on any cell in the model you can bring up the formula auditor. This option is also added to the EconExpert-WIND UTILITIES Menu and on the Right Click feature in the spreadsheets, allowing you to use the Excel Trace Functions to determine which cells in the model provide source data for any cell of interest, and which cells in the model depend on that cell.

6) Range Protection for Project Summary and Graphs Sheets

This option allows you to turn ON or OFF the Range Protection for the Project Summary and the eight Graph Sheets. This feature can be used to customize or enhance the model's preprogrammed graphs, or to add new graphs to the model. Unfortunately, as various cases are run in any Excel model the formatting of graphs can change in ways that may not be desirable. This is an acknowledged bug in Microsoft Excel. If the formatting of the graph is disrupted, it can be easily corrected by first turning OFF the range protection and then simply clicking on the graph to make the desired changes. After completing the corrections it is recommended that you turn the protection back ON. For Help on formatting graphs in Excel, see the Excel Help Menu and perform a search for "Charts".

Please note that when a graph is selected, the EconExpert-WIND Command Menu will disappear. The Menu will reappear when the selected graph is closed. The graph can be closed by clicking on any cell in the model.

7) Hide Comments in Cells

You can turn on or off the Help comments that are provided throughout the model. The Help comments are described in more detail in the next section.

8) Temporarily Change Company Name on Reports

You can temporarily change the name of the company that will appear in the reports that are generated from the EconExpert-WIND menu. When you reinitialize the model, the name will be reset to the default value that the model is registered to.

9) Create "Values-Only" Copy of the Model for Sharing with Others

From the UTILITIES MENU (or from the EconExpert Help Menu), you can create a "Values-Only" copy of the current EconExpert-WIND case. This "Values-Only" copy of EconExpert-WIND can be shared with others who may not be licensed to use EconExpert-WIND. It will not be possible to run new cases using the "Values-Only" copy, and once saved and reopened, the EconExpert-WIND Command Menu will have limited functionality (the NAVIGATE, PRINT and HELP options will be "Fully Functional"). No special license codes will be required to open and view the "Values-Only" version from any PC that has Microsoft Excel Versions 2002 or later.

Because the Sensitivity Cases and Tornado diagrams included in a "Values-Only" copy of the model will only be accurate if they are updated to the current case, you will be offered the option to run all of the model's Sensitivity Cases prior to converting the model to "Values-Only". This may take several minutes to execute depending on the speed of your processor. The Tornado Diagrams must be individually generated. If you elect not to update the Sensitivities, the Sensitivity Tables, Tornado Tables, Sensitivity Graphs and Tornado Graphs can be deleted from the "Values-Only".

Prior to executing a "Values-Only" conversion, you will be prompted with a number of Warnings, advising you to save the original spreadsheet before making the conversion, and to save the "Values-Only" file to a new filename to avoid overwriting the "Fully Functional" model.

Note that saved "Fully Functional" electronic copies of EconExpert-WIND that are not converted to "Values-Only" can be shared with others, however, those "Fully Functional" Electronic copies

will not be enabled on an unlicensed computer unless the user has obtained the appropriate License Codes from CEI.

Later in this manual there is an additional discussion on saving "Fully-Functional" and "Values-Only" copies of EconExpert-WIND and to review the Software License Agreement included in the Appendix.

10) Automatically Insert Formulas in the Annual Inputs Sheet Referencing Table 1D Data Conversion Sheet

The Data Conversion sheet provides additional flexibility to utilize energy pricing and performance in up to 24-Periods defined by the user. Select this option to link the aggregated data in Data Conversion Sheet to the model by formula reference to the Annual Inputs Sheet. In the Data Conversion Sheet, there are **annual** entries for:

- Hours in Each Period (this is where you enter the Period Names)
- Gross MWH Energy Production
- Curtailment Risk % (Reduction in Gross Production)
- Energy Sales for each PPA Term
- Revenue per MWH for each PPA Term

Plant Capacity and capacity factors mathematically averaged and referenced in Table 1C with formulas linked to the Data Conversion Sheet.

Input rows are unprotected and **shaded in green**. Period 24 is calculated by difference to ensure that the total number of hours in a full calendar year is equal to 8760 (note that leap years are neglected).

Please note the following points when you use this feature:

- All data is entered in Current $.
- Data can be copied and pasted from other sources. The pasted data should be pasted as VALUES from the source data file, or can be linked using formulas.
- Aggregated results will be referenced by formulas in the Annual Inputs Sheet, overwriting the current Annual Inputs and overriding Global Inputs in the years that non-zero values are transferred.
- If block period data is utilized, it is recommended that the user enter that data for the whole project life. If the data is not available for the whole project life, use formulas in the cells to project the data over the entire project life. Otherwise, where blank cells or zeros are transferred to the Annual Inputs Sheet, the Global Inputs data will be applied.

11) Compare EconExpert-Wind Cases or Files to Identify Changes

EconExpert offers two options for comparing different cases and quickly understanding the differences between those cases.

a) Comparison Feature #1: You can compare the INPUT SHEETS of two different cases and identify which inputs have changed.

This procedure allows you to track input changes between two different EconExpert-WIND models. Input categories that have changed are compared and identified (by highlighting on an **ORANGE** BACKGROUND). A new worksheet is created with copies of all of the tables in the model, with the changed items highlighted.

You can also 'Track' input changes between an active input sheet and a holding bin in the same model by saving the current model as two different file names, with the desired cases to be compared each respectively activated in one of the files.

PLEASE NOTE THAT THIS IS A MEMORY (RAM) INTENSIVE PROCEDURE. IT IS RECOMMENDED THAT YOU CLOSE OTHER APPLICATIONS AND SPREADHSEETS BEFORE EXECUTING THE COMPARISON PROCEDURE!

The procedure will involve three spreadsheets:

- The 'TARGET' EconExpert-WIND model is the model that you want to identify the changes in. The 'TARGET' model MUST be opened FIRST.
- The 'REFERENCE' EconExpert-WIND model is the model that you want compare/track changes against.
    - The 'REFERENCE' model MUST be opened SECOND.
    - Record the filename of the 'REFERENCE' model as you will need to enter this information.
- The 'COMPARISION' file (which you will name) that highlights the fields that have been changed.

Also note that the 'TARGET' and 'REFERENCE' models must each be ENABLED.

A copy of each of the respective input sheets from the 'TARGET' model will be created in the 'COMPARISON' file with a name that you designate. The COMPARISON FILE will contain copies of the respective Global Inputs, Annual Inputs and Data Conversion Input Sheets, with the changed input fields HIGHLIGHTED on a BRIGHT **ORANGE** Background.

Once initiated, you will not be able to terminate this macro until it is completed. You will be requested to provide two pieces of information:

- The Name of the REFERENCE EconExpert-WIND Data File. The REFERENCE file is the one that you want to compare the TARGET file against.
- The Name of the new 'COMPARISON' file you want to create that will highlight the changes between the cases. This 'COMPARISON' file will be saved in the same directory as the 'TARGET' file that you are identifying changes in.

Other important requirements for running this macro include:

- The name you entered for the REFERENCE Data file must be precisely correct.
- BOTH the TARGET AND REFERENCE models must be ENABLED.
- There must NOT be a file with the same name as the COMPARISON file that is currently opened.

- Both the TARGET AND REFERENCE files have at least two available windows. If they do not, to add a window from the Excel Command Menu select:

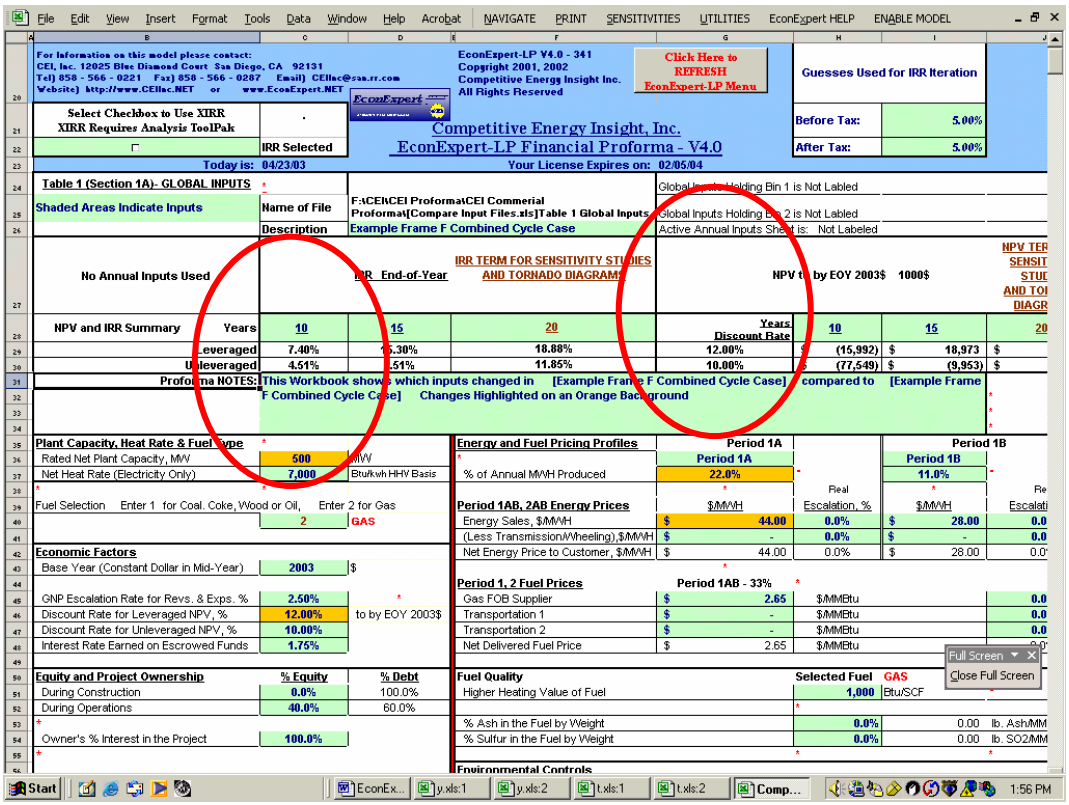
Window New Window

from the Excel menu to add a window to the file where it is required.

The Figure on the next page illustrates how changes in the Global Inputs Sheet are highlighted. The Current (Target) case is illustrated in a new worksheet with each of the input cells that have changed highlighted in **ORANGE**.

The **ORANGE** shaded cells indicate where input changes have occurred in the TARGET file relative to the REFERENCE file.

Figure 7 - Comparing Data Files - Highlighting of Inputs that Changed in a TARGET File


File Edit View Insert Format Tools Data Window Help Acrobat NAVIGATE PRINT SENSITIVITIES UTILITIES EconExpert HELP ENABLE MODEL
For Information on this model please contact:
CEI, Inc. 12025 Blue Diamond Court San Diego, CA 92131
Tel) 858 - 566 - 0221 Fax) 858 - 566 - 0287 Email) CEIlac@san.rr.com
Website) http://www.CEIlac.NET or www.EconExpert.NET
EconExpert-LP V4.0 - 341
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All Rights Reserved
Click Here to REFRESH EconExpert-LP Menu
Guesses Used for IRR Iteration
Before Tax: 5.00%
After Tax: 5.00%
Select Checkbox to Use XIRR
XIRR Requires Analysis ToolPak
IRR Selected
Competitive Energy Insight, Inc.
EconExpert-LP Financial Proforma - V4.0
Today is: 04/23/03
Your License Expires on: 02/05/04
Table 1 (Section 1A)- GLOBAL INPUTS
Shaded Areas Indicate Inputs
Name of File
F:\CEI\CEI Proforma\CEI Commercial Proforma\[Compare Input Files.xls]Table 1 Global Inputs
Description
Example Frame F Combined Cycle Case
Global Inputs Holding Bin 1 is Not Labled
Global Inputs Holding Bin 2 is Not Labled
Active Annual Inputs Sheet is: Not Labeled
No Annual Inputs Used
IRR End-of-Year
IRR TERM FOR SENSITIVITY STUDIES AND TORNADO DIAGRAMS
NPV t by EOY 2003$ 1000$
NPV TER SENSIT STUD AND TO DIAGR
NPV and IRR Summary
Years 10 15 20
Years Discount Rate 10 15 20
Leveraged 7.40% 15.30% 18.88% 12.00% ($15,992) $ 18,973 $
Unleveraged 4.51% 11.51% 11.85% 10.00% ($77,549) $ (9,953) $
Proforma NOTES: [This Workbook shows which inputs changed in [Example Frame F Combined Cycle Case] compared to [Example Frame F Combined Cycle Case] Changes Highlighted on an Orange Background
Plant Capacity, Heat Rate & Fuel Type
Rated Net Plant Capacity, MW 500 MW
Net Heat Rate (Electricity Only) 7,000 Btu/kwh HHV Basis
Fuel Selection Enter 1 for Coal, Coke, Wood or Oil, Enter 2 for Gas
2 GAS
Economic Factors
Base Year (Constant Dollar in Mid-Year) 2003 $
GNP Escalation Rate for Revs. & Exps. % 2.50%
Discount Rate for Leveraged NPV, % 12.00% to by EOY 2003$
Discount Rate for Unleveraged NPV, % 10.00%
Interest Rate Earned on Escrowed Funds 1.75%
Equity and Project Ownership % Equity % Debt
During Construction 0.0% 100.0%
During Operations 40.0% 60.0%
Owner's % Interest in the Project 100.0%
Energy and Fuel Pricing Profiles
Period 1A Period 1B
% of Annual MWH Produced 22.0% 11.0%
Period 1AB, 2AB Energy Prices $/MWH Real Escalation, % $/MWH Re Escalati
Energy Sales, $/MWH $ 44.00 0.0% $ 28.00 0.0
(Less Transmission/Wheeling),$/MWH $ - 0.0% $ - 0.0
Net Energy Price to Customer, $/MWH $ 44.00 0.0% $ 28.00 0.0
Period 1, 2 Fuel Prices Period 1AB - 33%
Gas FOB Supplier $ 2.65 $/MMBtu 0.0
Transportation 1 $ - $/MMBtu 0.0
Transportation 2 $ - $/MMBtu 0.0
Net Delivered Fuel Price $ 2.65 $/MMBtu
Fuel Quality Selected Fuel GAS
Higher Heating Value of Fuel 1,000 Btu/SCF
% Ash in the Fuel by Weight 0.0% 0.00 lb. Ash/MM
% Sulfur in the Fuel by Weight 0.0% 0.00 lb. SO2/MM
Environmental Controls
Full Screen
Close Full Screen
Start
EconEx...
y.xls:1
y.xls:2
t.xls:1
t.xls:2
Comp...
1:56 PM

b) Comparison Feature #2: You can compare ALL OF THE SHEETS, quantifying the magnitude of changes between two cases.

This Macro works only with IDENTICAL VERSIONS of EconExpert-WIND. This procedure allows you to Compare and Quantify Differences between two different EconExpert-WIND models. You can also Compare and Quantify Differences between an active input sheet and a holding bin in the same model by saving the current model as two different file names, with the desired cases to be compared each respectively activated in one of the files. A new worksheet is created with copies of all of the tables in the model. Every cell in the model (inputs or

calculations) that has changed is identified (by highlighting with an **ORANGE** BACKGROUND) and the amount of the difference between the two cases (either positive or negative) is quantified.

PLEASE NOTE THAT THIS IS A MEMORY (RAM) INTENSIVE PROCEDURE! IT IS RECOMMENDED THAT YOU CLOSE OTHER APPLICATIONS AND SPREADSHEETS BEFORE IT IS INITIATED.

The procedure will involve four spreadsheets:

- The 'TARGET' EconExpert-WIND is the model that you want to identify the changes in. The 'TARGET' model MUST be opened FIRST.
- The 'REFERENCE' EconExpert-WIND model is the model that you want compare changes against.
    - The 'REFERENCE' model MUST be opened SECOND.
    - Record the filename of the 'REFERENCE' model as you will need to enter this information.
- The 'COMPARISION' file (which you will name) will highlight the fields that have been changed.
- A Temporary File that EconExpert will create and then delete.

Note that the 'TARGET' and 'REFERENCE' models MUST each have at least TWO available windows, AND the 'TARGET' and 'REFERENCE' models MUST have different names AND BOTH MUST BE ENABLED.

A copy of each of the respective Input and Results Sheets from the 'TARGET' model will be created in the 'COMPARISON' file with a name that you designate. All changes will be quantified and HIGHLIGHTED on a **BRIGHT ORANGE** Background. Once initiated, you will not be able to terminate this macro until it is completed. You will be asked for two items when this procedure is initiated:

- The Name of the REFERENCE EconExpert-WIND Data File. The REFERENCE file is the one that you want to compare the TARGET file against.
- The Name of the new 'COMPARISON' file you want to create that will quantify and highlight the DIFFERENCES between the cases. This 'COMPARISON' file will be saved in the same directory as the 'TARGET' File that you are identifying changes in.

Other important requirements for running this macro include:

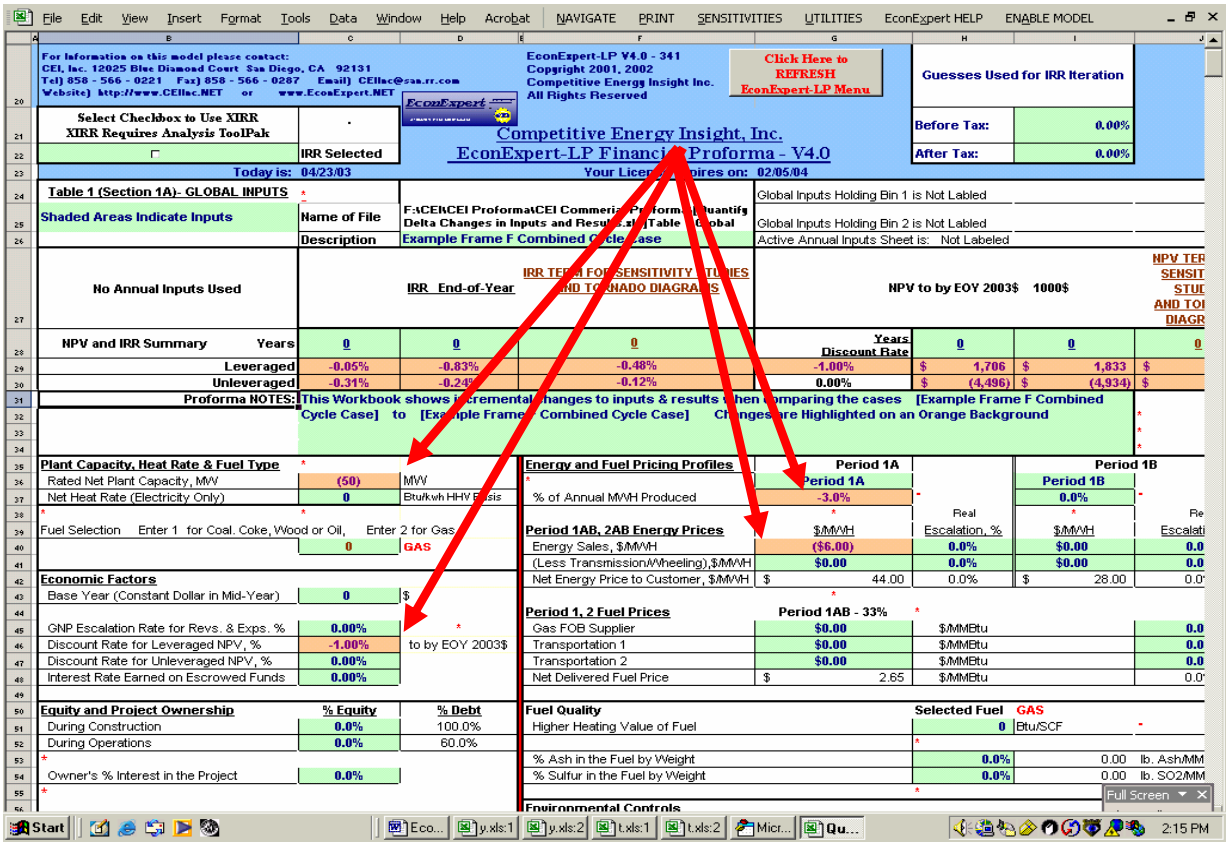
- The name you entered for the REFERENCE Data file must be precisely correct.
- BOTH the TARGET AND REFERENCE models must be ENABLED.
- There must NOT be a file with the same name as the COMPARISON file that is currently opened.
- Both the TARGET AND REFERENCE files have at least two available windows. If they do not, to add a window from the Excel Command Menu select:

Window New Window

from the Excel menu to add a window to the file where it is required.

The Figure on the next page illustrates how changes in the Global Inputs Sheet are highlighted. The Current (Target) case is illustrated in a new worksheet with each of the input cells that have changed highlighted in **ORANGE**

Figure 8 - Comparing Data Files - Quantifying the Difference in Inputs and Results in a TARGET File versus a REFERENCE FILE


File Edit View Insert Format Tools Data Window Help Acrobat NAVIGATE PRINT SENSITIVITIES UTILITIES EconExpert HELP ENABLE MODEL
For Information on this model please contact:
CEI, Inc. 12025 Blue Diamond Court San Diego, CA 92131
Tel) 858 - 566 - 0221 Fax) 858 - 566 - 0267 Email) CEInc@san.rr.com
Website) http://www.CEInc.NET or www.EconExpert.NET
EconExpert-LP V4.0 - 341
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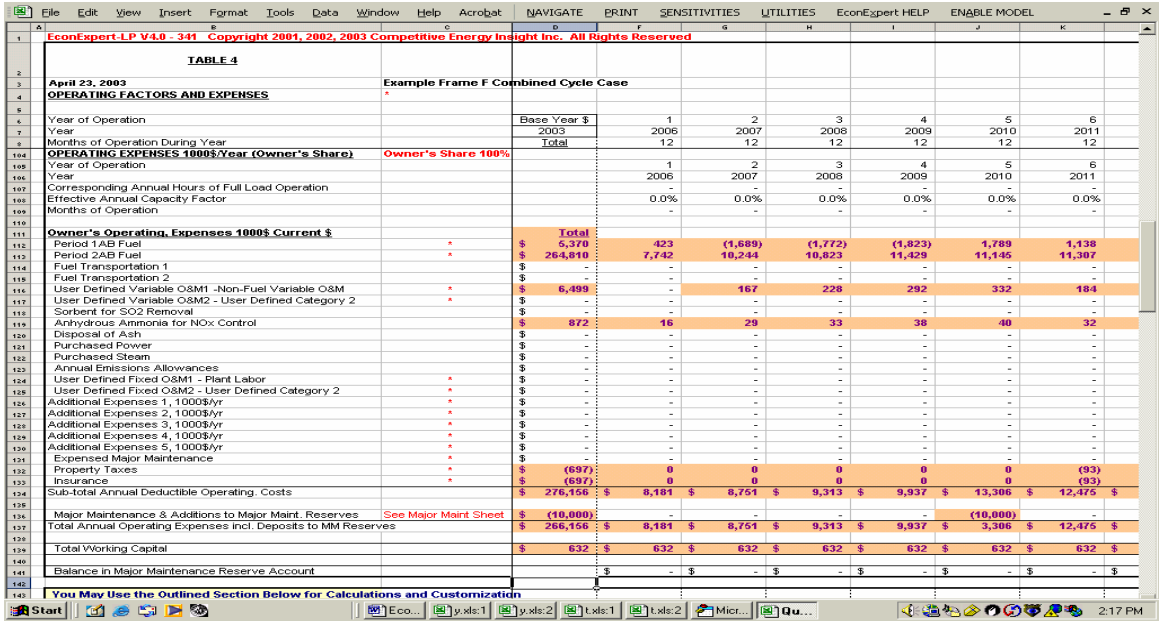
Competitive Energy Insight Inc.
All Rights Reserved
Click Here to REFRESH EconExpert-LP Menu
Guesses Used for IRR Iteration
Before Tax: 0.00%
After Tax: 0.00%
Select Checkbox to Use XIRR
XIRR Requires Analysis ToolPak
IRR Selected
Competitive Energy Insight, Inc.
EconExpert-LP Financial Proforma - V4.0
Today is: 04/23/03
Table 1 (Section 1A)- GLOBAL INPUTS
Shaded Areas Indicate Inputs
Name of File
Description
Example Frame F Combined Cycle Case
Global Inputs Holding Bin 1 is Not Labled
Global Inputs Holding Bin 2 is Not Labled
Active Annual Inputs Sheet is: Not Labeled
No Annual Inputs Used
IRR End-of-Year
NPV to by EOY 2003$ 1000$
NPV and IRR Summary Years
Leveraged -0.05% -0.83% -0.48% -1.00% 1,706 1,833
Unleveraged -0.31% -0.24% -0.12% 0.00% (4,496) (4,934)
Proforma NOTES: This Workbook shows incremental changes to inputs & results when comparing the cases [Example Frame F Combined Cycle Case] to [Example Frame F Combined Cycle Case] Changes are Highlighted on an Orange Background
Plant Capacity, Heat Rate & Fuel Type
Rated Net Plant Capacity, MW (50) MW
Net Heat Rate (Electricity Only) 0 Btu/kwh HHV Basis
Fuel Selection Enter 1 for Coal, Coke, Wood or Oil, Enter 2 for Gas
0 GAS
Economic Factors
Base Year (Constant Dollar in Mid-Year) 0
GNP Escalation Rate for Revs. & Exps. % 0.00%
Discount Rate for Leveraged NPV, % -1.00% to by EOY 2003$
Discount Rate for Unleveraged NPV, % 0.00%
Interest Rate Earned on Escrowed Funds 0.00%
Equity and Project Ownership % Equity % Debt
During Construction 0.0% 100.0%
During Operations 0.0% 60.0%
Owner's % Interest in the Project 0.0%
Energy and Fuel Pricing Profiles Period 1A Period 1B
% of Annual MWH Produced -3.0% 0.0%
Period 1AB, 2AB Energy Prices $/MWH Real Escalation, % $/MWH
Energy Sales, $/MWH ($6.00) 0.0% $0.00
(Less Transmission/Wheeling),$/MWH $0.00 0.0% $0.00
Net Energy Price to Customer, $/MWH $ 44.00 0.0% $ 28.00
Period 1, 2 Fuel Prices Period 1AB - 33%
Gas FOB Supplier $0.00 $/MMBtu
Transportation 1 $0.00 $/MMBtu
Transportation 2 $0.00 $/MMBtu
Net Delivered Fuel Price $ 2.65 $/MMBtu
Fuel Quality Selected Fuel GAS
Higher Heating Value of Fuel 0 Btu/SCF
% Ash in the Fuel by Weight 0.0% 0.00 lb. Ash/MM
% Sulfur in the Fuel by Weight 0.0% 0.00 lb. SO2/MM
Environmental Controls
Full Screen
Start
2:15 PM


File Edit View Insert Format Tools Data Window Help Acrobat NAVIGATE PRINT SENSITIVITIES UTILITIES EconExpert HELP ENABLE MODEL
EconExpert-LP V4.0 - 341 Copyright 2001, 2002, 2003 Competitive Energy Insight Inc. All Rights Reserved
TABLE 4
April 23, 2003
Example Frame F Combined Cycle Case
OPERATING FACTORS AND EXPENSES
Year of Operation
Year
Months of Operation During Year
OPERATING EXPENSES 1000$/Year (Owner's Share)
Owner's Share 100%
Corresponding Annual Hours of Full Load Operation
Effective Annual Capacity Factor
Months of Operation
Owner's Operating, Expenses 1000$ Current $
Period 1AB Fuel
Period 2AB Fuel
Fuel Transportation 1
Fuel Transportation 2
User Defined Variable O&M1 -Non-Fuel Variable O&M
User Defined Variable O&M2 - User Defined Category 2
Sorbent for SO2 Removal
Anhydrous Ammonia for NOx Control
Disposal of Ash
Purchased Power
Purchased Steam
Annual Emissions Allowances
User Defined Fixed O&M1 - Plant Labor
User Defined Fixed O&M2 - User Defined Category 2
Additional Expenses 1, 1000$/yr
Additional Expenses 2, 1000$/yr
Additional Expenses 3, 1000$/yr
Additional Expenses 4, 1000$/yr
Additional Expenses 5, 1000$/yr
Expensed Major Maintenance
Property Taxes
Insurance
Sub-total Annual Deductible Operating. Costs
Major Maintenance & Additions to Major Maint. Reserves
See Major Maint Sheet
Total Annual Operating Expenses incl. Deposits to MM Reserves
Total Working Capital
Balance in Major Maintenance Reserve Account
You May Use the Outlined Section Below for Calculations and Customization
Start
2:17 PM

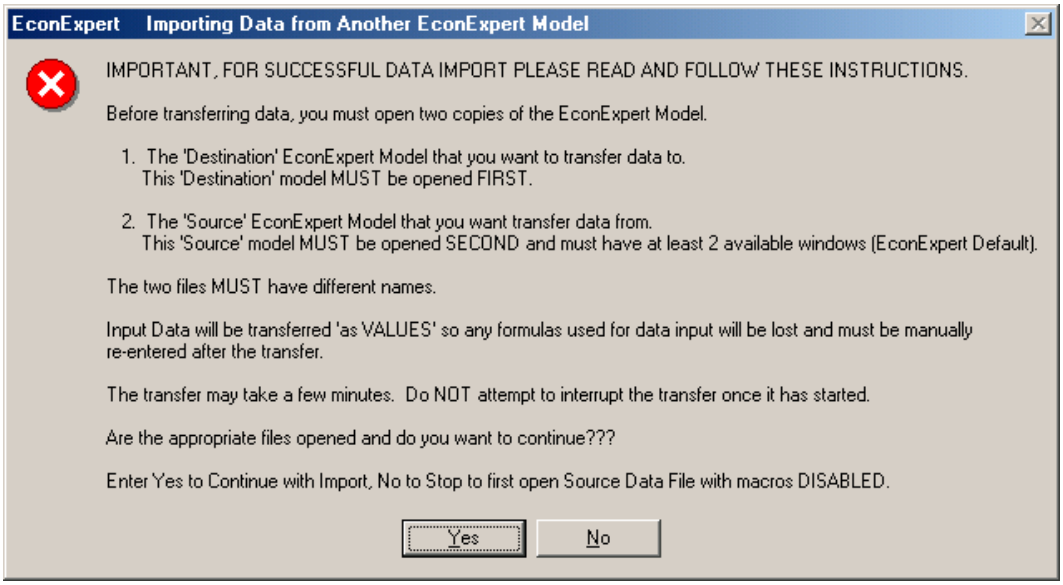
The **ORANGE** shaded cells indicate where input changes have occurred in the TARGET file relative to the REFERENCE file and identify the amount and direction of the change.

12) Reserved

13) Import Data

EconExpert-WIND is equipped with a utility that allows you to transfer input data from one copy of the model to another. This feature is most useful when you upgrade the model and need to easily transfer data to the new version without having to manually re-enter the data. It is also a convenient way, in combination with the Holding Bins, to consolidate models. After selecting this option, the following screen will appear:

Figure 9- Data Import Instructions


EconExpert Importing Data from Another EconExpert Model
IMPORTANT, FOR SUCCESSFUL DATA IMPORT PLEASE READ AND FOLLOW THESE INSTRUCTIONS.
Before transferring data, you must open two copies of the EconExpert Model.
1. The 'Destination' EconExpert Model that you want to transfer data to.
This 'Destination' model MUST be opened FIRST.
2. The 'Source' EconExpert Model that you want transfer data from.
This 'Source' model MUST be opened SECOND and must have at least 2 available windows (EconExpert Default).
The two files MUST have different names.
Input Data will be transferred 'as VALUES' so any formulas used for data input will be lost and must be manually re-entered after the transfer.
The transfer may take a few minutes. Do NOT attempt to interrupt the transfer once it has started.
Are the appropriate files opened and do you want to continue???
Enter Yes to Continue with Import, No to Stop to first open Source Data File with macros DISABLED.
Yes
No

This is the complete set of instructions for data transfer. Important points include:

- Open the Destination Model first. The destination model is the new version of EconExpert-WIND that you would like to import data to.
- Open the Source Model second. This is the version of EconExpert-WIND that contains the input data that you would like to transfer from.

14) Extend My License

This feature will require a conversation with CEI to obtain the codes to extend your license.

E) HELP

EconExpert-WIND offers four On-Line Help Features:

- The EconExpert Help Menu
- Comments posted in individual cells throughout the model, providing descriptions of the functions of individual inputs and overviews of tables provided in the model
- The EconExpert-WIND Tutorial
- This User's Manual

1) The EconExpert Help Menu

EconExpert-WIND is equipped with a Customized Help Menu to assist you in using the model. The menu provides other instructions and Helpful hints on using the model, technical definitions, and access to special features of the model. Items on the EconExpert Help Menu include:

- Tutorial - Access to the EconExpert-WIND On-Line Tutorial. The Tutorial will walk you through the model and all of its important features
- Input Tables - Descriptions of the functions of Table 1 Global Inputs and Table 1C Annual Inputs
- Worksheet Tables - Descriptions of the purpose and functions of each of the 26 Worksheets included in EconExpert-WIND
- Command Menus - Descriptions of the purpose and functions of each of the options provided on the EconExpert-WIND Command Menu
- Customizing the Proforma - Helpful suggestions on how you can customize EconExpert-WIND to perform "project specific" analyses
- Partnership Definitions - Helpful definitions for items on Table 1P Partner Returns
- Definitions and Explanations - Helpful definitions for items throughout the model
- Populate Table 1C with links to Data Conversion Sheet – As described in the Utilities section
- Comparing Runs and Identifying/Quantifying Changes – As described in the Utilities section
- Saving EconExpert-WIND to Disk - Discussion how to save and reuse "Fully Functional" and "Values-Only" copies of EconExpert-WIND
- Help Comments in Worksheet Cells - A discussion of the Help Comments provided in worksheet cells, and how to enable or disable the Cell Comments feature

2) Help Comments

Individual input cells throughout the EconExpert-WIND model include Comments that provide information about the purpose and function of the respective input cell or results table. Cell Comments can be turned ON or turned OFF from the EconExpert-WIND UTILITIES Menu. If the Cell Comments feature is turned ON, a **Red Triangle** comment indicator will appear in the upper right corner of the affected cells in the model. The corresponding Help Comment will appear as you move the cursor near to or over the **Red Triangle**.

VII) Worksheet Tabs

Tabs at the bottom of the spreadsheet identify the various worksheets and tables in the EconExpert-WIND model. Worksheets are organized into the following categories:

- Administrative
- Summaries
- Inputs
- Reports
- Graphs

Administrative Sheets

These sheets provide the user information about the model, holding bins, and other information that support the use of the model.

1) License

The License Sheet provides the Software License Agreement. EconExpert-WIND may only be used under the terms of the applicable License Agreement and the user must acknowledge their acceptance of those terms in order to enable the model. The terms of the software license should be read carefully BEFORE using the model. Prior to the first use of the model the user must accept the license agreement by clicking on the button labeled "I Have Read and Accept to the Terms of the EconExpert-WIND License", located at the end of the License Agreement.

2) Title

The Title Sheet includes the EconExpert-WIND and CEI Logos, and notification of the product copyright. Contact information for CEI is also provided. The Macro Button on the top of this sheet will take the user to the Global Inputs sheet.

3) Status

The Status Sheet provides Alerts and Warnings to the User that are relevant to the current configuration of the model. Warnings include detection of potentially conflicting inputs (e.g. a specified loan term that is longer than the project life), special circumstances and notification that Annual Inputs to Table 1C will produce results that will override or will be added to results otherwise generated from corresponding inputs to Table 1.

It is highly recommended that the user check this sheet prior to reporting final results to Help insure that the current case has been modeled correctly.

Summary Sheets

These sheets provide a couple different summary views of the project.

4) Project Summary

This sheet provides a 1-page summary of key project parameters. The figure below provides a screen shot of the Project Summary Sheet.

- IRR Summary
- NPV Summary
- Project Operating Parameters
- Project Schedule
- Investment Costs
- Energy Pricing
- Sources and Uses of Operating Funds in $/MWH

The user is free to modify and customize this summary and it can be extracted to any other application including another Excel Workbook or MS Word. To unprotect and modify the Summary sheet, select:

UTILITIES Range Protection of Graphs and Project Summary Sheets

You may then modify the sheet, change entries, add or delete rows, etc., tying formulas in the table to other cells throughout the model. As long as you do not make changes outside of the boxed section of the sheet, the resulting summary that you create can be reported using the PRINT option on the Command Menu.

5) Table 2 Summary

Table 2 provides consolidated summaries of the results generated in Tables 3 - 11. Table 2 is organized as follows:

- Top Section - Basic Summary
  - Unleveraged and Leveraged Annual NPVs and IRRs
  - Return on Equity
  - Debt Coverage Ratios

- Bottom Section - Expanded Summary
  - Construction Expenditures
  - Revenues
  - Expenses
  - Debt Service
  - Taxes
  - Leveraged Cash Flow
  - Operating Cash Flow Breakdown
  - Unleveraged Cash Flow

Input Sheets

These five (5) sheets contain all the possible inputs for this model. A more detailed description of the inputting process is discusses later in this manual.

1) Table 1Q Quick Project Analysis

This table is used to quickly analyze a wind power project, by only focusing on set of economic inputs to model a project. Simply entering values on this table is insufficient to perform a quick analysis. The user must go to the Utilities menu, and select

"Set up Model in Quick Project Analysis Format"

Once you select this option, Table 1Q is linked into the rest of the model. You can run sensitivities and also modify the other inputs sheets to enhance your analysis.

2) Table 1 Wind Global Inputs

Table 1 is where Global Inputs are entered. Global Inputs are premises that typically apply over the life of the project, or input values that are escalated at a constant rate over the life of the project.

Inputs to Table 1 are organized into categories of inputs that can be located using the NAVIGATE Menu, by scrolling through the Table, or by using the Global Inputs Wizard. Table 1 is Range Protected, allowing you to enter data ONLY into specified green shaded input cells.

The individual Global Inputs are discussed in more detail later in this manual. The Appendix also provides examples on how to use the various Global Inputs. A variety of Cell Help Comments also appear with each input in Table 1.

3) Table 1C Annual Inputs

Annual Inputs apply only to a given year in the life of the project, but there are entries for every year of the project. Use Annual Inputs in the case where the economic item is going to vary year to year – and not in a fixed manner like a straight escalation.

The individual Annual Inputs are discussed in more detail later in this manual. Examples provided in the Appendix also give examples on how to use the various Global Inputs. A variety of Cell Help Comments also appear with each input in Table 1.

PLEASE NOTE: Cost entries are inputs to Table 1C in CURRENT $, and represent the actual amount spent in a given year. This means that the cost and revenue entries to Table 1C will not be impacted by escalation rates entered elsewhere in the model, and fixed values will not be impacted by partial year operation. The values will be used by the model as entered.

4) Table 1D - Data Conversion

The Data Conversion Sheet allows the user automatically to convert forward energy data provided in a format that is different from EconExpert-WIND, to the format of four Energy and two Fuel Pricing periods used in the EconExpert-WIND model. The current version of the model is equipped with the capability to automatically reference aggregated forward data entered into 1 - 24 block periods / year to the Annual Inputs sheet.

5) Table 1P – Partner Returns

Note that in more recent versions of EconExpert-WIND, partnership analysis is performed in a separate module.

Table 1P Partner Returns is architected to model various schemes that might be written into a partnership agreement, allowing up to three equity partners with individual tax rates, capital accounts, distributive shares, and distributions. Table 1P is linked with Table 11P, which details the partnership financial statements and calculates the cash available for distribution in every year of the project. For more information about modeling partnership structures please see the section later in this manual.

Report Sheets

Each of these sheets contains the calculations and outputs for the described areas.

6) Table 3 Construction

Table 3 provides calculations of monthly and cumulative monthly construction expenditures based on a standard S-Curve Drawdown schedule and the Debt/Equity ratios specified in Table 1. Interest during construction and soft costs (Start-up/mobilization/spares, working capital, debt reserve, and up-front loan fees, etc.) are also allocated over the construction term.

As an alternative to the Default "S-Curve" Capital Cost Drawdown Schedule generated by EconExpert-WIND and to a constant Debt/Equity schedule during the drawdown period, you may input your own custom Capital Cost Drawdown and/or Debt Equity Schedules by entering the percentage of Capital Costs that are expended monthly during the Construction Phase and the percentage of project costs covered by equity in each month. It is important to note that non-zero entries to this schedule will override the default values, in the months that they are entered. Since the resulting drawdown schedule must sum to 100%, it is recommended that you provide the complete drawdown schedule if custom drawdown entries are made. A warning will be issued if the resulting drawdown schedule does not sum to 100%.

Table 3 is organized as follows:

- Construction Drawdown and Financing Schedule
- Monthly Construction Cost Schedule
- Cumulative Monthly Construction Cost Schedule

The total monthly drawdown during the construction phase is computed as follows:

- Land and Development Costs (which may actually occur prior to closing) are scheduled as a "one-time" expense, lumped in the first month of the construction phase.
- Capital Costs and Loan Commitment Fees are expended according to the Drawdown Schedule.
- Start-up, Mobilization and Spares costs are spread evenly overly the last six months of the Construction Schedule. If the Schedule is shorter than six months they are divided evenly over the period.
- Working Capital is accumulated over the last three months of the Construction Schedule. If the Schedule is shorter than three months they are divided evenly over the period.
- Debt Reserves are deposited in the last month of the schedule.

- Interest During Construction is calculated and added to other construction term costs based on the percent of construction costs that are debt financed, using the Construction Term Debt parameters, and the resulting monthly expenditures described above.
- Loan Commitment Fees are based on the monthly "undrawn" balance.
- Vendor Letter of Credit Admin Fee is based on the schedule on Table 3 below the Monthly Schedule and above the Cumulative Construction Schedule

7) Table 4 Operating Costs

Table 4 provides calculations of all operating expenses and related escalation factors. Escalated annual fixed and variable operating expenses are computed in $1,000/yr, based on inputs to Tables 1 and 1C. Table 4 is organized as follows:

- The top Section
  - Partial year adjustments
  - Escalation rates
  - Calculations for operating expense items

- The bottom Section
  - Accounts Payables and Receivables
  - Operating Costs
  - Balance Sheet items including Working Capital contributions, Spare Parts Purchases, and O&M Reserve contributions
  - Working Capital and O&M Reserve Account balances

  Itemized operating cost categories provided in Table 4A include:

  - Variable Cost O&M 1-2
  - Fixed O&M Cost 1 - 3
  - Other O&M Cost 1 – 4
  - Consumption of Spare Parts
  - Land Lease and Developer Lease Payments
  - User Defined Variable O&M 1-3
  - Property Taxes and Insurance

8) Table 5 Debt Service

Table 5 provides detailed calculations of principal and interest payments on primary and subordinated debt. Debt Terms entered in Tables 1 and 1C are reported and resulting annual debt service requirements are calculated and displayed. Debt Coverage Ratios are also reported.

Table 5 is organized as follows:

- The top section of Table 5 provides the factors used for the Debt Service calculations.
  - Custom Debt Treatment - Accelerated Principal Payments, Interest Only Payments
  - Schedules - Breakdown of Interest Rates, Interest Payments, Principal Repayments, Etc.

- Table 5A located on the bottom section of Table 5 provides Annual Debt Service Expenses in 1000$.
  - Annual Debt Service Payments

- Interest Payments
- Principal Payments
- Cash Available to Cover Debt
- Debt Coverage Ratios

9) Table 6 Revenues

Table 6 provides calculation of gross revenues associated with electric sales. Table 6 is organized as follows:

- The Top Section of Table 6 provides Revenue Factors and Escalation Rates including:
  - The Energy Sales Profile by Energy Pricing Period
  - Sales of Other Commodities including steam and other byproducts
  - Escalation Rates used for Revenues
  - Escalated Prices for Energy and Commodities

- Table 6A located in the bottom section of Table 6 provides Escalated Annual Revenues in 1000$, based on the Owner's Percentage Interest in the project. Revenue streams are itemized in detail. If less than 100% Ownership has been specified as an input, the revenues shown here will be prorated based on the Owner's Share of the total project.

  Itemized revenue categories provided in Table 6A include:

  - A breakdown of revenues from energy sales into the available four Energy Pricing Periods
    - Period 1A
    - Period 1B
    - Period 2A
    - Period 2B

  - A breakdown of all taxable revenue sources including:
    - Total Energy Sales (Sum of 1A, 1B, 2A and 2B above)
    - Capacity / Ancillary Services Payments
    - Other Annual Revenue (from Table 1C Annual Inputs)
    - Steam Sales
    - Other By-Product Sales
    - Other Energy Sales
    - Interest Income from Maintenance and Debt Reserves

  - Other sources of revenue associated with liquidation of reserves and disposition of the land and asset at the end of the debt term or the end of the project life.

10) Table 7 Cash Flow Leveraged

Table 7 provides calculations of the net cash flow before-tax, income taxes and net cash flow after-tax. Results provided in this table are calculated on a Leveraged basis (i.e. including construction phase and operating phase debt). The resulting Cash Flow is reported during the construction phase and through the operating phase. Calculations of revenues minus expenses, Depreciation and taxes, are provided to be used in the calculations of Net Present Value (NPV) and Internal Rate of Return (IRR) provided in Table 8.

Results in Table 7 are expressed based on the Owner's percentage interest in the project.

11) Table 7A Cash Flow Unleveraged

Table 7A provides calculations of the net cash flow before-tax, income taxes and net cash flow after-tax. Results provided in this table are calculated on an unleveraged basis (i.e. Assuming the project is executed with 100% equity and with no debt during either the construction or operations phases). The resulting cash flow is reported during the construction phase and through the operating phase. Calculations of revenues minus expenses, Depreciation and taxes are provided to be used in the calculations of Net Present Value (NPV) and Internal Rate of Return (IRR) provided in Table 8A.

NOTE: The calculated unleveraged IRR may change slightly (usually by less than 0.1%) as a function of changes in project equity. This can occur when you select the "Factor" option for calculating property taxes or insurance costs, which when carried through to the unleveraged analysis are tied to the cost basis, which in turn has a small dependency on the amount of debt assumed. This effect is very minor and will not be observed if either annual inputs or a fixed 1000$/yr amount is entered for Property Taxes and Insurance costs.

Results in Table 7A are expressed based on the Owner's percentage interest in the project.

12) Table 8 NPV & IRR Leveraged

Table 8 provides calculation of the Net Present Value (NPV) and Internal Rate of Return (IRR) on a Leveraged Basis using results from Table 7.

The IRR represents the after-tax return on the Owner's investment. The NPV is calculated at the specified Discount Rate. A negative NPV does not necessarily indicate that a project is losing money, but rather that the IRR achieved by the project is less than the discount rate specified for the NPV calculation. An NPV of 0 means that the IRR and Discount Rate are equal.

The Debt Service Coverage Ratios (DSCR) from the debt sheet is reported. DSCR is a common metric used by banks and financing institutions to measure project performance versus debt obligations. DSCR's are provided on a both a before-tax and an after-tax basis. Debt Coverage Ratio (Before-Tax) is defined as the Earnings Before Interest, Taxes and Depreciation (EBITAD) divided by the debt service payment and the fees on the Senior Debt. The Coverage Ratio after-tax on the Senior Debt is defined as the net cash flow after-tax available to cover debt divided by the debt service payment and the fees on the Senior Debt.

Results in Table 8 are expressed based on the Owner's percentage interest in the project.

13) Table 8A NPV & IRR Unleveraged

Table 8A provides calculation of the Net Present Value (NPV) and Internal Rate of Return (IRR) on an unleveraged basis using results from Table 7A.

The IRR represents the after-tax return on the investment. The NPV is calculated at the specified Discount Rate. A negative NPV does not necessarily indicate that a project is losing money, but rather that the IRR achieved by the project is less than the discount rate specified for the NPV calculation. An NPV of 0 means that the IRR and Discount Rate are equal.

NOTE: The calculated unleveraged IRR may change slightly (usually by less than 0.1%) as a function of changes in project equity. This can occur when you select the "Factor" option for calculating Property Taxes or Insurance costs, which when carried through to the unleveraged analysis are tied to the cost basis, which in turn has a small dependency on the amount of debt assumed. This effect is very minor and will not be observed if either annual inputs or a fixed 1000$/yr amount is entered for Property Taxes and Insurance costs.

Results in Table 8A are expressed based on the Owner's percentage interest in the project.

14) Table 9 Sources and Uses

Table 9 provides an analysis of the Sources of Funds and the Uses of Funds (in 1000$) during the construction period and during the operations phase of the project. Sources and Uses of funds are balanced in each year. A complementary Sources and Uses calculation during the operations phase is provided in Table 12 where results are expressed in $/MWH.

Results in Table 9 are expressed based on the Owner's percentage interest in the project.

15) Table 10 Major Maintenance

Table 10 provides calculations of Periodic, Capitalized and Expensed Major Maintenance Costs. The balance accumulated in the Major Maintenance Reserve account is also calculated. Major Maintenance Reserves are applied to Periodic Major Maintenance Expenses in years when Major Outages have been scheduled. Periodic and Capitalized Major Maintenance Costs are depreciated for Book and for Cash Purposes.

Expensed Major Maintenance Costs are treated in the same manner as are Fixed Operating Expenses.

16) Table 11 Financials

Table 11 provides the Project's Financial Statements including the Income Statement, Cash Flow Statement and Balance Sheet based on the Owner's percentage interest in the project. The predicted Owner's Stock Performance, with and without the project, is also estimated.

Table 11 is organized as follows:

- Table 11 - Income Statement - The Income Statement is used to calculate Net Income (revenues minus expenses, Depreciation and taxes) for the project, using GAAP Book Accounting Methods.
- Table 11A - Cash Flow Statement - The Cash Flow Statement identifies sources of project cash and amounts available for potential distribution to the Owner.
- Table 11B - Balance Sheet - The Balance Sheet identifies assets, equity and liabilities attributed to the project, where Total Annual Assets are in balance with Total Annual Equity and Liabilities in each year and over the project life.

- Table 11C - Owner's Stock Performance - Predictions of the impacts of the project on the Owner's stock price are provided based on the project's Net Income, the dilution effects of the equity additions attributed to the project, and the predicted performance of the Owner's stock without the project.

Results in Table 11, 11A, 11B and 11C are all expressed based on the Owner's percentage interest in the project. EconExpert uses the 'Deferral Method' of Generally Accepted Accounting Principles (GAAP) for all Book Analyses including the Income Statement, Cash Flow Statement and Balance Sheet in Table 11.

17) Table 12 Dollars per MWH

Table 12 provides costs and revenues calculated in $/MWH during the operations phase. These calculations are performed by dividing the annual revenues and expenses by the net annual power generation. Table 12 includes the following expressed in Escalated (Current) $/MWH:

- Revenues by category including energy sales, capacity sales and other revenues sources.
- Operating Costs by category including individual contributions to fixed and variable operating costs.
- Debt Service Expenses including a breakdown of Primary and Subordinated Debt payments.
- Sources of Funds including revenues from energy sales, capacity sales and other income sources.
- Uses of Funds including identification of net income after-tax.
- A Summary Breakdown of Revenues, Expenses, Debt Service, Income Taxes and Net Income.

18) Table 13 Depreciation

Table 13 provides calculations of Depreciation for Cash and for Book Purposes. Depreciation is used to recover investment costs for items that have multi-year lives including the initial Capital Investment and Major Maintenance Expenses that occur during the life of the project.

Table 13 includes the following:

- Depreciation for Tax - Initial Capital Investment - IRS Modified Accelerated Cost Recovery (MACRS) Schedules and State and Federal Bonus Depreciation.

- Depreciation for Tax - Major Maintenance
  - Periodic Major Maintenance Expenses - using the Major Maintenance Frequency defined in Table 1.
  - Other Capital Improvements - Four schedules are provided in Table 1C that allow the user to input additional Capitalized Major Maintenance Expenses using Depreciation lives of 5, 10, 15 or 20 years.

- Depreciation for Book - Initial Investment and Major Maintenance
  - The Initial Capital Investment, Periodic Major Maintenance Expenses, and Other Capital Improvements are depreciated using the Straight-Line methods specified in Tables 1 and 1C.

19) Sensitivities

The Sensitivities Sheet is where Sensitivity Analyses and Tornado Diagrams are generated to study the impacts of variations of key project parameters on the calculated IRR and NPV. The Sensitivities Sheet contains a series of tables, each of which are used for a respective Sensitivity Analysis or Tornado Diagram. The user may specify individual increment amounts to be applied to each of the respective sensitivities. The IRR Term used for the Sensitivity Studies is entered in the IRR Summary Section at the top of Table 1.

Additional discussion of how to use EconExpert-WIND*'s* automated Sensitivity Features is provided later in this manual.

Graphs Sheets

Each of these sheets contains graphs for either base case results or sensitivities to the inputs.

1) Graphs Sensitivity 1 - 4

Note: In more recent versions of EconExpert-WIND, the Sensitivity Graphs Sheets 1 – 4 are included in a separate module.

Four worksheets in EconExpert-WIND provide plots showing results of Sensitivity Analyses to study how the IRR of a project will be impacted by incrementing individual inputs to the model. The corresponding Sensitivity Cases must be executed from the EconExpert-WIND Command Menu in order to reflect results consistent with the current case. The Sensitivity Increment for each case is entered in the respective tables that appear for each variable in the Sensitivity Sheet. The term used for all of the Sensitivity Analyses is entered at the top of Table 1. The Sensitivity Graphs provide plots of Leveraged and unleveraged IRR versus the variations in the selected parameter.

It is important to note that the Sensitivity Graphs are not updated automatically. Prior to printing the Sensitivity Graphs, they must be updated by running the corresponding Sensitivity Analysis for the current case. This can be accomplished by selecting the SENSITIVITIES Option on the EconExpert-WIND Command Menu. All of the Sensitivities can be run as a batch from the EconExpert-WIND SENSITIVITIES Menu.

2) Graphs Tornado 5

One worksheet in EconExpert-WIND provides plots showing all of the respective Tornado Diagrams used to study how the IRR of a project will be impacted by incrementing multiple project inputs. The corresponding Tornado Diagrams must be executed from the EconExpert-WIND Command Menu in order to reflect results consistent with the current case. The Increments are entered into a Data Input Sheet provided by EconExpert-WIND when you select the respective Tornado Diagram Option from the Command Menu. The term used for all of the Tornado Diagrams is entered at the top of Table 1. The Tornado Diagrams provide plots of leveraged and unleveraged IRR versus the variations in the selected parameter.

It is important to note that the Tornado Diagrams are not updated automatically. Prior to printing the Tornado Diagrams, they must be updated by running the corresponding Tornado Diagrams for the current case. This can be accomplished by selecting the SENSITIVITIES Option on the EconExpert-WIND Command Menu. Each of the Tornado Diagrams must be individually generated.

VIII) Inputs to the EconExpert-WIND model

There are five input sheets representing the various approaches that can be used to input data into the EconExpert-WIND model:

- Table 1 Wind Global Inputs is the main input sheet for the model. It allows you to enter values that typically apply (and may escalate at a constant rate) over the life of the project.
- Table 1C Annual Inputs allows the user to customize the behavior of inputs or to introduce new categories of inputs into the model. The results calculated from these annual entries will either override or will be added to amounts calculated from Inputs to Table 1 Global Inputs.
- Table 1D - Data Conversion Sheet provides inputs that can be divided into up to twenty four periods of your own design in this sheet. The resulting calculations can then be automatically referenced by formulas in the Annual Inputs Sheet producing a proforma that fully evaluates multi-period inputs. This sheet is not active unless you direct the model to use it by referencing this sheet using the "Populate" option on the UTILITIES menu.
- Table 1P - Partner Returns is architected to model various schemes that might be written into a partnership agreement, allowing up to three equity partners with individual tax rates, capital accounts, distributive shares, and distributions. Table 1P takes the results from the other tables and then adds on various inputs that allow customization at the partner level. Note that in more recent versions of EconExpert-WIND, partnership analysis is performed in a separate module.
- Table 1Q – Quick Project Analysis can be used to quickly analyze a wind power project, by only focusing on set of economic inputs to model a project. Simply entering values on this table is insufficient to perform a quick analysis. The user must go to the Utilities menu, and select

A wide range of project specific conditions can be easily and accurately modeled using this powerful combination of inputs sheets. Descriptions and functions of the individual inputs are provided in Help Comments included with each input cell. Additional discussion of the individual inputs sheets follows, and the Example Cases in the Appendix also provide examples of using the inputs sheets.

A) Table 1 Wind Global Inputs

Table 1 Wind Global Inputs are premises that typically apply over the life of the project, or input values that are escalated at a constant rate over the life of the project. Global Inputs include a complete check list of the typical factors modeled in a power project. Inputs to Table 1 are organized into categories of inputs that can be located using the NAVIGATE Menu or by scrolling through the Table. Table 1 is Range Protected, allowing you to enter data ONLY into specified (shaded green) input cells. Table 1 is organized into sections associated with the various classes of inputs.

Figure 10 - Table 1 Wind Global Input Categories

Column 1	*Column 2*	*Column 3*	*Column 4*
Schedule and Production	Revenues and Operating Expense	Investment Costs	Project Financing
▪ Project Schedule ▪ Turbine and Wind Farm Gross Capacity ▪ Wind Rating Profile ▪ Compounded Efficiency Losses and Net Capacity ▪ Economic Factors ▪ Taxes and Investment Tax Credits ▪ Owner's Stock Performance	▪ PPA Pricing Summaries ▪ Other Revenues ▪ Production Tax Credits ▪ Operating Expenses ▪ Developer Royalty ▪ Land Lease Royalty ▪ Property Tax and Insurance	▪ Phase 1 - Project Development ▪ Phase 2 - Engineering, Construction and Start-up ▪ Soft Costs ▪ Plant Residual Value	▪ Construction Financing ▪ Permanent Financing ▪ Senior Debt Structure ▪ Subordinated Debt Structure ▪ Sources of Capital Summary ▪ Depreciation ▪ Income Taxes and Investment Tax Credits ▪ Property Taxes and Insurance

Please note that inputs to Table 1 are in BASE YEAR dollars. This means that the cost and revenue entries to Table 1 will be escalated by the respective compounding of the GNP Deflator and the Real Escalation applied to each item, even if the cost or revenue does not start until a later year in the project. All results calculated using the Global Inputs Sheet will be prorated based on partial years of operation in the first and last years of the project life, as appropriate.

A red asterisk (*****) identifies cells where a potential warning message is located.

Also note that when inputs are entered in Table 1C Annual Inputs that override a particular entry to Table 1 Wind Global Inputs, the cell format in Table 1 will change to **Bold Red** and an **Annual Input** indicator will appear next to the respective input. This feature is provided just to advise you that a particular input to Table 1 is being overridden somewhere else in the proforma.

The Appendix also provides examples on how to use the various Global Inputs. A variety of cell Help Comments also appear with each input in Table 1. To view the comments first enable them from the EconExpert Help Menu and then place the cursor over the red triangle on the corner of the respective cell.

1) Schedule and Production

Project Schedule

The first section at the top left of Table 1 is the Project Schedule, where the user specifies the start of the project (Financial Closing Date), the duration of the installation (Construction Term), and the Project Life. In addition, in the section the user can segment the project life into multiple terms, specifically for PPA or different revenue pricing.

Figure 11 - Table 1 Wind Global Inputs – Taxes and Investment Tax Credits

Schedule and Production

Project Schedule

Financial Closing Date	04/01/06	MM/DD/YY
Construction Term, mos (0 - 48)	8	Months
Commercial Operation Start Date	12/01/06	
Project Life, Years (32 Max)	25	Years
Retirement Date	12/01/31	

PPA Schedule

PPA Start Date	12/01/06	

	Term Name	Years	From	To
Term 1	Contract Term	20	12/1/2006	11/30/2026
Term 2	Second Term	5	12/1/2026	11/30/2031
Term 3	Third Term	0		
Total Potential Term of PPA		25		

If the Project Life is shorter than the debt term or an applicable depreciation life than the residual principal balance and depreciation will be accelerated in the final year of operations. Other items such as Land Value and Working Capital are also recovered at the end of the Project Life. Tables throughout the model will show results over the resulting Project Life and columns after the end of the Project Life will show 0 at the top of the column indicating that the project is inactive during that period.

If the Start of Operations results in part year operations in the first year, costs in the first and last year of the project life will be prorated based on the percent of the year that the plant is in service.

Turbine and Wind Farm Capacity

The next section down is where the user enters the number of turbines and the rated capacity for each turbine. The model can accept up to two turbine models.

Wind Rating Profile / Annual Energy Production

The model offers up to six (6) entries for gross energy production. This model starts with electric generation, and assumes that the wind farm modeling has been done already, or that the user has already estimated generation amounts. The section accepts entries for six (6) defined Wind Rating levels (P50, P60, P75, P90, P95, and P99). The user can enter generation values in MWh in one or any of the associated entry cells. If the user only has one generation amount that they want to model, they can enter that amount in any of the green cell, and simply select the radio button next to the green entry cell.

This section is structured to allow the user to quickly run scenario analyzes for various wind profiles, by simply clicking on the radio buttons and monitoring the impacts on project returns. In addition there is a special Sensitivity graph just for comparing project economics based on the wind profile inputs.

A couple of the lines below the entry cells could use some defining, and these definitions continue in the next section.

- Annual Gross Energy Production – the generation inputted above, before any losses from the section below are subtracted
- Energy Production After Array Losses – the generation minus the losses specified in cell D123 – Windpark Efficiency Loss
- Energy Production After ALL Loses – the generation minus all losses that total to cell D 142, which includes the Array loss and all losses above line 142
- Net Energy Produced – the generation after All Losses and adjustments for the Curtailment Risk and Availability Factor

Compounded Efficiency Losses and Net Capacity

The inputs for this section are used to degrade the generation amount specified in the above section. Each line item has a definition in the Help Comments for that cell. Below the inputs, the Capacity and Capacity Factors are shown for each of the different levels specified above – Gross Capacity, Capacity after Array Losses, and Capacity After All Losses and Risks. The Plant Capacity Factor is the percentage of potential annual generation that is produced over the year. So, a capacity factor of 80% means that the net annual MWH sold from the facility is 80% of the plant's generating capacity times 8760 hours / year. As the Curtailment Risk and Availability Factor do not really reduced Capacity, there is not a capacity factor calculated after those losses are accounted for.

Economic Factors

This section captures the escalation rates and discount factors that determines the base rates throughout the model. Inputs here include:

- Base Year: The time frame from which all escalation calculations will be performed. Operating Cost and Revenue inputs to Table 1 are expressed in Base Year $ and will be escalated to the current year by compounding the Real Escalation Rate assigned to that component with the GNP Escalation Rate described below.

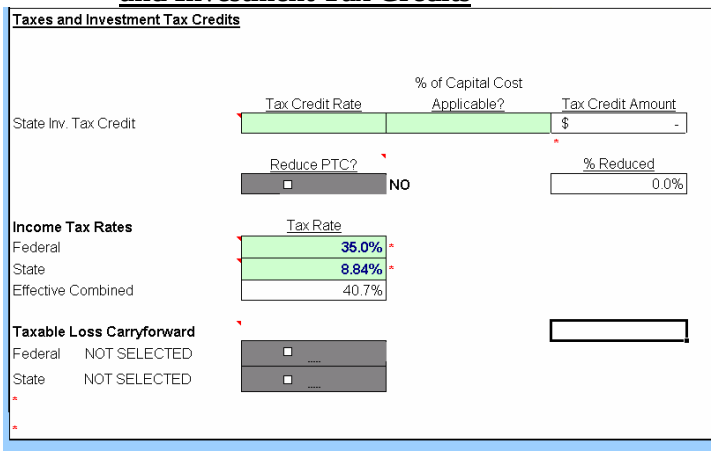
- GNP Escalation Rate: The life-of-project rate of general inflation. Each cost or revenue input in Table 1 also includes a Real escalation entry, which when added to the GNP Escalation Rate provides the effective rate of escalation for that input. If the rate of escalation for an input is equal to the GNP Escalation Rate, that input's Real Escalation Rate would be 0.0%. If an input escalates at a rate higher than inflation, its Real Escalation Rate would be greater than 0.0%, and similarly it would be negative if the input escalates at a rate lower than the general inflation rate.

- Discount Rates: Used for NPV Calculations, on a leveraged and an unleveraged basis. These are the rates used in Tables 8A and 8B for calculating the Net Present Value of the project discounted to the year of financial closing. They are normally the cost of capital for the corporation.

- Interest Rate Earned on Escrowed Funds: This is the rate earned on escrowed funds, including Debt Reserves and O&M Reserves.

If desired, the user may alternatively provide an annual schedule of GNP Escalation Rates in Table 1C.

Figure 12 - Table 1 Wind Global Inputs – Taxes and Investment Tax Credits



Taxes and Investment Tax Credits
This section includes income tax and investment tax credits.

This section has an input for State Investment Tax Credits (ITC), as there is not a federal Investment Tax Credit at this time for wind power. To enter an ITC, first enter the Credit Rate as a percent, then enter the percent of capital costs that are applicable to the ITC. Lastly, the ITC might reduce the federal PTC value. Click the box in under Reduce PTC? To give the PTC a "haircut".

Income Tax rates for Federal and State and entered in the next entry cells below. Last, indicate if you want to have Carry Forward Tax Losses. If this checkbox is selected, tax loss write-offs will be carried forward and applied during future years when positive pre-tax earnings occur. If not selected, tax losses will be credited in the year that they occur, resulting in a tax credit that would be applied to other sources of income not modeled in the analysis.

Production Tax Credits are handled in one of the following sections.

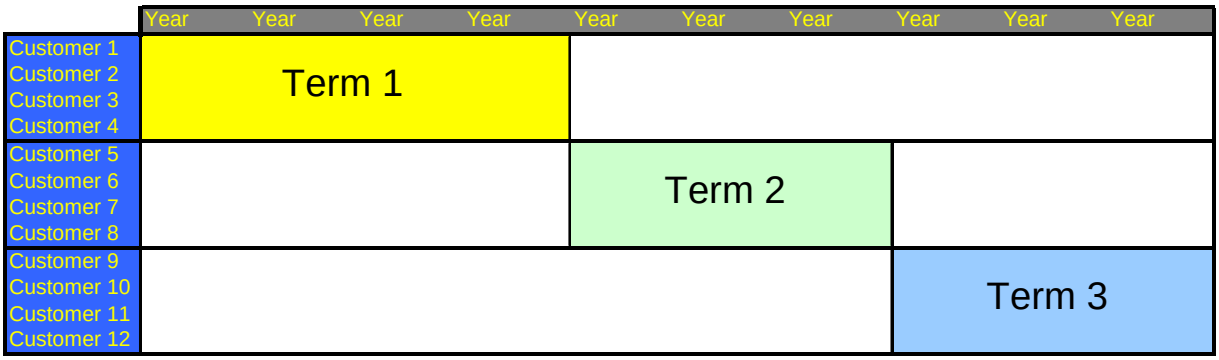
Owner's Stock Performance Calculations
EconExpert-WIND includes analysis of predicted impacts of net income from the project on the price of the Owner's stock. These calculations are performed based on an assumed Table 1 Inputs of baseline (without the project) stock price, baseline projected corporate earnings profile, and baseline number of shares outstanding. If the checkbox for Issue Shares for Project Equity is selected and you have entered projections for the pricing and number of shares of Owner's Stock that are outstanding, the model will issue additional shares to cover the Owner's Equity in the project. The resulting current price earnings ratio is applied to estimate future stock performance based on accretion/dilution of shares associated with new project equity and the resulting net income additions from the project to the Owner's account. See the section above for information on how to issue shares in place of project equity.

If desired, the user may alternatively provide an annual baseline data on the Owner's Stock in Table 1C.

2) Project Revenue and Operating Expenses

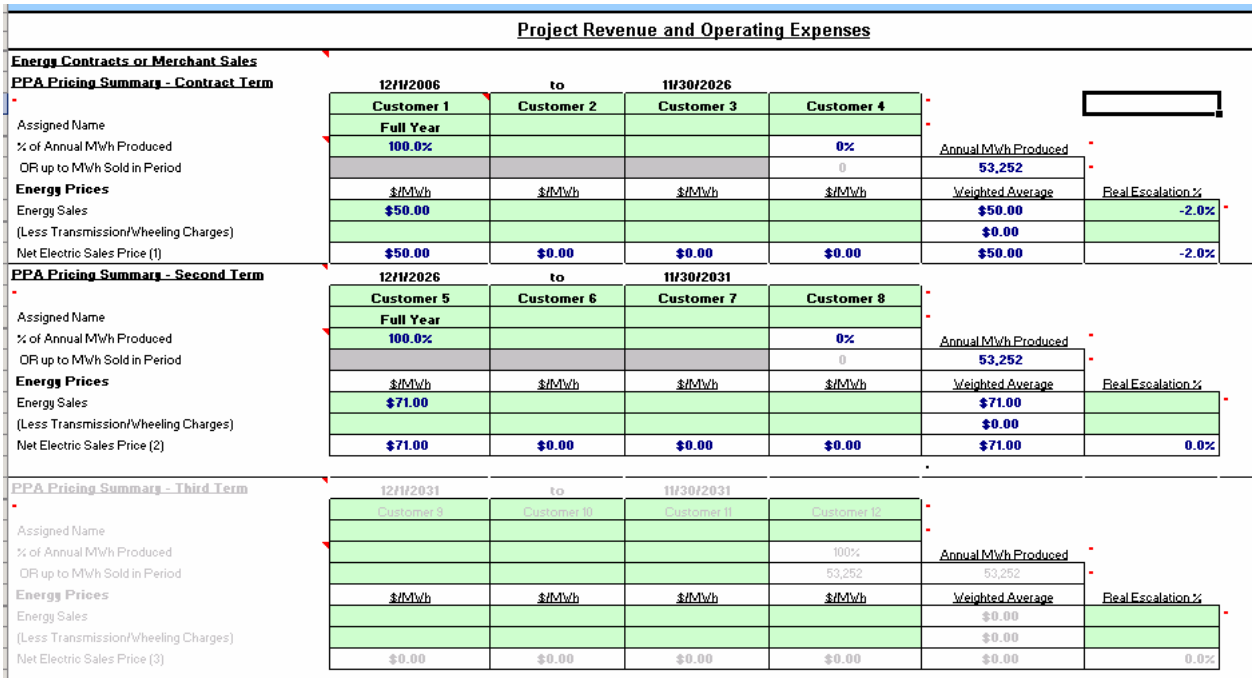
PPA Pricing Terms 1-3
The EconExpert-WIND model is set up to handle 3 different time periods (terms) within the specific project life, and then up to 4 different pricing structures within each of those terms. In other words, the user can specify four different customers in each pricing term. In the simplest case the user can have one price for all power for the entire life of the project. In the most complicated case, the user can set up to 12 different prices over the life of the project, divided into 3 terms. The picture below attempts to visually explain this concept.

Figure 13 - Table 1 Wind Global Inputs – PPA Pricing Structure



The number and length of the terms are specified in the Project Schedule section of Table 1. If a term is selected, the fonts will be normal. If a term is not selected, the fonts will be gray and hard to read. For example, in the diagram below, only two terms were indicated in the Project Schedule section, so the third term is "grayed out".

Figure 14 - Table 1 Wind Global Inputs – PPA Pricing Summaries



Project Revenue and Operating Expenses

Energy Contracts or Merchant Sales						
PPA Pricing Summary - Contract Term	12/1/2006	to	11/30/2026			
	Customer 1	Customer 2	Customer 3	Customer 4		
Assigned Name	Full Year					
% of Annual MWh Produced	100.0%			0%	Annual MWh Produced	
OR up to MWh Sold in Period				0	53,252	
Energy Prices	$/MWh	$/MWh	$/MWh	$/MWh	Weighted Average	Real Escalation %
Energy Sales	$50.00				$50.00	-2.0%
(Less Transmission/Wheeling Charges)					$0.00	
Net Electric Sales Price (1)	$50.00	$0.00	$0.00	$0.00	$50.00	-2.0%
PPA Pricing Summary - Second Term	12/1/2026	to	11/30/2031			
	Customer 5	Customer 6	Customer 7	Customer 8		
Assigned Name	Full Year					
% of Annual MWh Produced	100.0%			0%	Annual MWh Produced	
OR up to MWh Sold in Period				0	53,252	
Energy Prices	$/MWh	$/MWh	$/MWh	$/MWh	Weighted Average	Real Escalation %
Energy Sales	$71.00				$71.00	
(Less Transmission/Wheeling Charges)					$0.00	
Net Electric Sales Price (2)	$71.00	$0.00	$0.00	$0.00	$71.00	0.0%
PPA Pricing Summary - Third Term	12/1/2031	to	11/30/2031			
	Customer 9	Customer 10	Customer 11	Customer 12		
Assigned Name						
% of Annual MWh Produced				100%	Annual MWh Produced	
OR up to MWh Sold in Period				53,252	53,252	
Energy Prices	$/MWh	$/MWh	$/MWh	$/MWh	Weighted Average	Real Escalation %
Energy Sales					$0.00	
(Less Transmission/Wheeling Charges)					$0.00	
Net Electric Sales Price (3)	$0.00	$0.00	$0.00	$0.00	$0.00	0.0%

The user can also assign names to each of the terms in the Project Schedule, and can name each customer in this section. The user may specify the percentage of yearly production that will be assigned to each price (customer), or the user can set a generation limit (up to that amount). The logic is from left to right, meaning that the customer in the far left column will be served first, and the customer in the far right last. If the values entered in the first three columns do not equal 100%, or is less than the total MWh generated, then the last customer receives whatever generation remains. Also, the percentage method of assigning generation takes precedence over the MWh method, meaning that if a value is entered in the percentage line it will override any entries in the MWh line.

EconExpert-WIND will calculate a composite yearly energy price for use in the proforma, and will calculate yearly net revenues from energy sales during each of the specified periods.

If desired, the user may alternatively provide an annual forward energy prices in Table 1C.

Other Revenues
In addition to revenues from Energy Sales, the user may specify other sources of revenues in Table 1 that include:

- Renewable Energy Credits
- Other variable energy sales ($/MWh)
- Power sales based on capacity ($/MW)

For each of these payments the user specifies the starting and ending years, the base year rate, and Real Escalation for each payment.

Production Tax Credits
Entries for the Federal Production Tax Credits (PTC) are set to follow the language set in the energy legislation. The user enters the 2008 PTC value set at the beginning of 2008, the escalation rate, and then the duration of the credit. Note that the escalation rate is not the real escalation, but the estimated nominal escalation ignorant of the GDP deflator. This entry logic is unique to the model.

Fixed and Other O&M Costs
Fixed Operations and Maintenance (O&M) costs are not dependent on annual net generation. Fixed O&M Inputs to Table 1 can be entered in either of two sections – Fixed O&M and Other O&M.

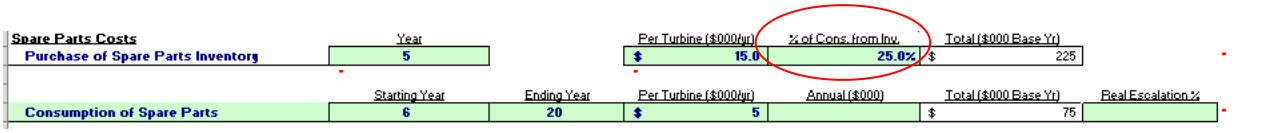
Fixed O&M is structured to handle a Warranty, Post-Warranty and another period of costs. The user can name these categories and the names will be carried into the various tables and charts throughout the model. Each category has a starting and ending year, and in most cases the starting year for the second and third categories should follow the ending years for the previous categories.

Other O&M offers four independent categories for fixed O&M costs, set up so that the user can name each category.

The annual fixed O&M values can be entered in 1000$/year (Annual) for a full calendar year of operations, or on a per turbine basis. The two entries are additive – meaning if you enter values in both cells the values will be combined for a total. Costs are also expressed in Base Year $, and a Real Escalation factor is provided. Note that real escalation will be added to the GNP Escalator, to arrive at the actual escalation for that component.

Spare Parts
The model is structured to have a one time Spare Parts Purchase, which places an amount of spare parts in inventory. Next, there is also a Spare Parts Consumption rate, which specifies the amount of spare parts consumed each year. If there are values for both entries, the user can also indicate the amount of spare parts from inventory that are consumed each year. The amount is entered as a percentage, as shown in the following diagram:

Figure 15 - Table 1 Wind Global Inputs – Spare Parts Costs



O&M Reserve

The Operations and Maintenance (O&M) reserve is the amount that a lender or third party might require of the operator. In this section the user defines the value by the equivalent of the number of months of operating expenses, and starting and ending years. If the user would prefer to simply enter a value for each year, they can use Table 1C.

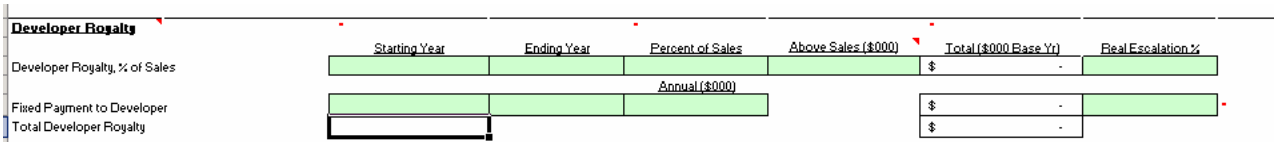
Variable O&M

Variable Operations and Maintenance (O&M) costs are dependent on gross annual electric power production, before the losses are reduced. There are two user-defined Variable O&M Inputs to Table 1. Both categories offer entries in $/MWH. The user can name these categories and the names will be carried into the various tables and charts throughout the model. The calculated annual variable O&M costs will be the sum of these two entries and will reflect the annual plant capacity factor.

Developer Royalty

There are two options for the Developer Royalty, which is a payment to the Developer after the project is operational, based on the amount of power sold or revenue generated. The user can enter a variable payment based on either a percent of sales or a $/MWH, or a fixed payment based on an annual amount. Note for each of these items, you must specify the starting and ending years, and you also have the option of entering a specific Real Escalation for each item.

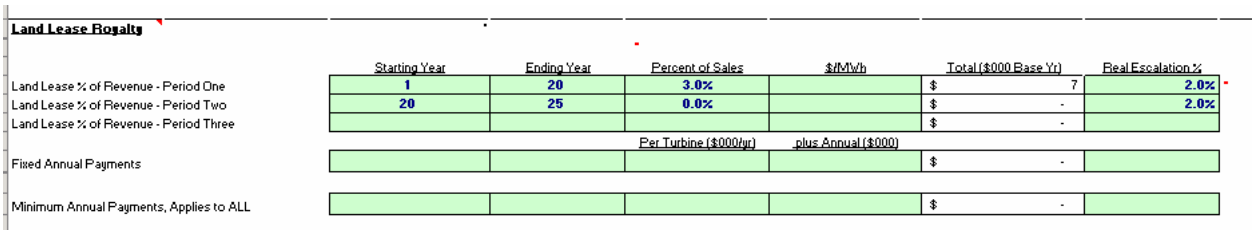
Figure 16 - Table 1 Wind Global Inputs – Developer Royalty



Land Lease Royalty

There are three options for the Lease Land Royalty, which is a payment to the land owner after the project is operational, based on the amount of power sold or revenue generated. First, there are three time periods that can have different pricing terms, based on either a percent of sales or a $/MWH. The years for these three items can overlap, but in most cases you will wants the years to be sequential. Next, there is a fixed annual payment based on either the number of turbines or an annual payment. Last, there is a minimum payment than can be specified. The minimum payment is calculated against the sum of the variable and fixed Land Lease Royalty payments. Note for each of these items, you must specify the starting and ending years, and you also have the option of entering a specific Real Escalation for each item.

Figure 17 - Table 1 Wind Global Inputs – Lease Land Royalty



Land Lease Royalty

	Starting Year	Ending Year	Percent of Sales	$/MWh	Total ($000 Base Yr)	Real Escalation %
Land Lease % of Revenue - Period One	1	20	3.0%		$ 7	2.0%
Land Lease % of Revenue - Period Two	20	25	0.0%		$ -	2.0%
Land Lease % of Revenue - Period Three					$ -	
			Per Turbine ($000/yr)	plus Annual ($000)		
Fixed Annual Payments					$ -	
Minimum Annual Payments, Applies to ALL					$ -	

Property Taxes and Insurance

Property Taxes and Insurance can be individually input in Table 1 as amounts in ($000) /year, and as a "Factored" amount (if both entries are used, they are summed) as follows:

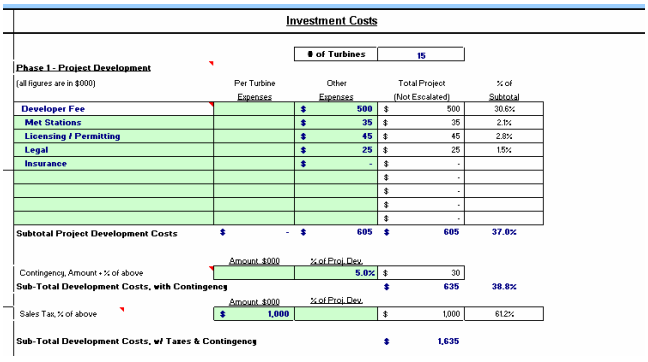
- The Factor for estimation of life-of-project yearly Property Taxes and Insurance is the percentage of current book Asset Basis. As the asset is depreciated and the basis declines, the annual Property Taxes and Insurance will correspondingly decline.
- If a ($000) amount is entered for Property Taxes or Insurance, the amount is used in each year of the project life and is escalated using the GNP deflator.
- The user may also enter annual property taxes and annual insurance costs in the Annual Inputs Table, where specific amounts can be entered in each year.

3) Investment Costs

Capital Investment Costs are entered only in Table 1. These are costs incurred during the project development, engineering and construction phases of the project, but prior to commercial operations of the facility. Please note that these costs are not escalated by the model, and are used as the exact amounts entered by the user. For each line item the user can enter a 'per turbine' cost and a total cost. These two costs are additive, and are summed in the adjacent column.

These costs are broken into two main categories:

Figure 18 - Table 1 Wind Global Inputs - Development Costs



Investment Costs

# of Turbines	15		
Phase 1 - Project Development			
(all figures are in $000)	Per Turbine Expenses	Other Expenses	Total Project (Not Escalated)	% of Subtotal
Developer Fee		$ 500	$ 500	30.6%
Met Stations		$ 35	$ 35	2.1%
Licensing / Permitting		$ 45	$ 45	2.8%
Legal		$ 25	$ 25	1.5%
Insurance		$ -	$ -	
			$ -	
			$ -	
			$ -	
			$ -	
Subtotal Project Development Costs	$ -	$ 605	$ 605	37.0%
	Amount $000	% of Proj Dev.		
Contingency, Amount + % of above		5.0%	$ 30	
Sub-Total Development Costs, with Contingency			$ 635	38.8%
	Amount $000	% of Proj Dev.		
Sales Tax, % of above	$ 1,000		$ 1,000	61.2%
Sub-Total Development Costs, w/ Taxes & Contingency			$ 1,635	

Phase 1 - Development Costs

These costs are typically incurred prior to financial closing and are treated by EconExpert-WIND as a lump sum expense in the first month of the construction phase. A number of default cost categories are provided as well as two optional User-Defined Categories. The user may also add contingency as a percentage of the Development Costs and as a fixed amount in ($000) - the two entries will be summed if both are entered. You can specify up to 8 categories of Phase 1 Development Costs.

One category title, the Developer Fee, cannot be modified. This is because this specific item feeds into the partnership calculations, and is set up so that the user can allocate this payment to one of the partners. This allocation is handled on Table 1, under the Project Finance section, and the result appears on Table 1P.

The user may also add contingency as a percentage of the Phase 1 costs and as a fixed amount in ($000) - the two entries will be summed if both are entered. Likewise, the user can enter a sales tax figure as an amount and as a % of Phase 1 Costs – the two entries will be summed if both are entered.

Phase 2 - Engineering, Construction and Start-up Costs
These are costs that occur after financial closing, including interest during construction, which is calculated using the Construction-Phase Drawdown Schedule in Table 3. Land and Soft Costs (e.g. Start-up/Mobilization/Spares, Working Capital, Up-Front Financing Fees, Debt Reserves and Interest During Construction), which are concentrated at the start or end of the construction phase, are also entered here.

The first section under Phase 2 is the Land costs. Most wind farms projects lease the land, but in the case that a project purchases land, the value can be entered here.

The next section, Wind Turbine Costs, offers five user-defined rows in addition to the Wind Turbine Cost rows. Note that there are two Wind Turbine Cost rows – one for costs in dollars and one for Euros, in the event that turbines being purchased are European and manufacture is pricing the turbines in Euros. Simply click the check box, as indicated in the figure below, enter a conversion rate, and the cost in Euros in the top row. The user can then enter any additional wind turbine costs in dollar on the row below. On Table 3 Construction the user can allocate those costs of the construction cycle, and which costs will occur in which months.

Figure 19 - Table 1 Wind Global Inputs – Wind Turbine Costs

Wind Turbines

Some Wind Turbine costs in Euros? ☑ YES

EURO/US$ 0.8000

	Per Turbine Expenses	Other Expenses	Total Project (Not Escalated)	% of Subtotal
Wind Turbine Costs (in Euros)	$ 500	$ 500	$ 6,400	20.4%
Wind Turbine Costs (in $)	$ 1,250		$ 18,750	59.8%
Installation	$ 150		$ 2,250	7.2%
			$ -	
			$ -	
			$ -	
			$ -	
Subtotal All Wind Turbines Cost	$ 2,025	$ 625	$ 27,400	87.3%

The next section in Phase 2 is the Balance of Plant expenditures. All of the category titles can be modified in this section. In the next section, Other Costs, there is only one category title that can be modified. The other category is for the Project Valuation sensitivity, explained in another section.

The user may also add contingency as a percentage of the other Phase 2 Costs and as a fixed amount in ($000) - the two entries will be summed if both are entered. Likewise, the user can enter a sales tax figure as an amount and as a % of Phase 2 Costs – the two entries will be summed if both are entered.

The last section is the Soft Costs, which can be estimated using a Factored amount and a ($000) amount. If both are entered, they will be summed. Factored amounts are calculated as follows:

- Start-up and Mobilization Costs - As a percentage of the total Fixed O&M Costs in Base Year $
- Debt Reserves - Based on the equivalent/prorated number of months of debt payments using a mortgage type payment schedule
- Debt Reserves - Based on the equivalent/prorated number of months of debt payments using a mortgage type payment schedule
- Vendor Letter of Credit – as a percent of total Wind Turbine costs, which decreases as payments are made and tracked on Table 3 Construction
- Working Capital - Based on Accounts Receivable and Accounts Payable Days specified in the two entry cells. On Table 1C the user can simply specify a dollar amount, instead of considering receivable and payable days.

Wind Farm Residual Value

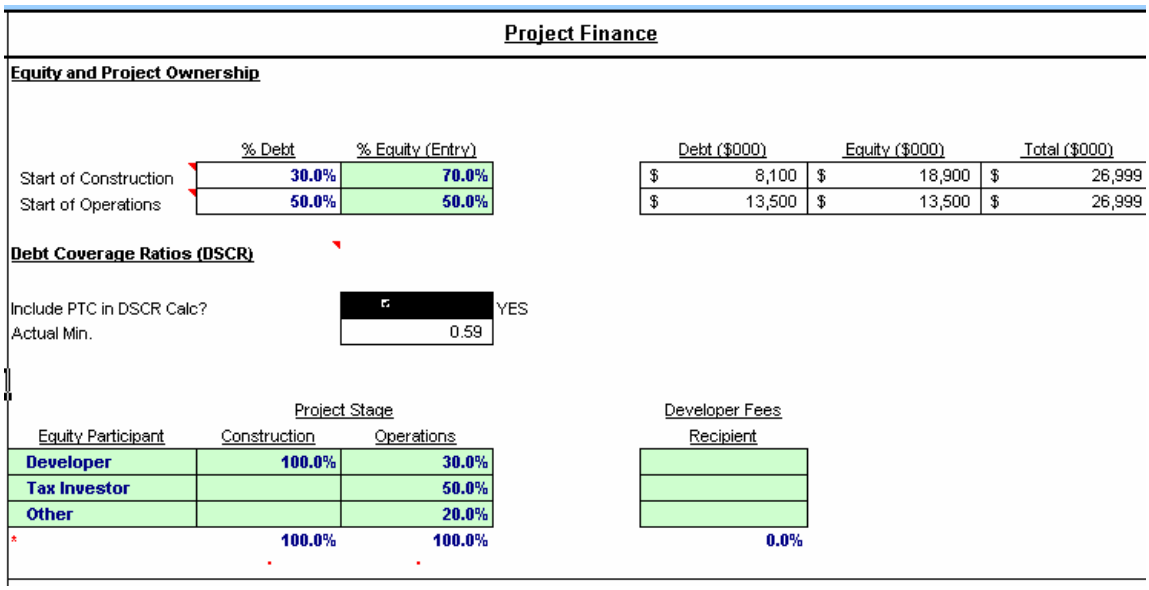
Following the Capital Investment Cost table, the user is provided with the option to recover a residual value on the plant investment at the end of the Project Life. The residual value can be specified both as an amount and as a percentage of the original plant basis. If both inputs are used the result will be the sum of the two inputs. In addition, assuming an as

4) Project Finance

After the project parameters are set it is time to decide how the project will be financed. The top section of the Project Finance column is the major finance inputs:

- Debt/Equity during Construction - This is the percentage of the costs realized during the construction phase that are funded with Owner's Equity. If set to 0, debt will be used to finance 100% of the construction period costs. Costs during the construction phase are calculated based on the Drawdown Schedule with Interest During Construction calculated based on the resulting debt. The Interest Rate on Construction Term Debt is discussed on page 56.
- Debt/Equity during Operations - The is the percentage of the Total Investment Cost, including Soft Costs and Interest During Construction, that is funded with Equity when the Permanent Debt is initiated. The remaining amount will be allocated to Primary and Subordinated Debt. The terms specified for Primary and Subordinated Debt, are discussed on page 56.
- Number of Equity Participants and share of equity - If the equity participants are forming a partnership, the partnership issues are handing on Table 1P. Lastly, if there is a partnership and one of the equity participants is the Developer, then the Developer Fees should be allocated to that Equity Participant in this section.

Figure 20 - Table 1 Wind Global Inputs – Equity and Project Ownership



Project Finance

Equity and Project Ownership

	% Debt	% Equity (Entry)	Debt ($000)	Equity ($000)	Total ($000)
Start of Construction	30.0%	70.0%	$ 8,100	$ 18,900	$ 26,999
Start of Operations	50.0%	50.0%	$ 13,500	$ 13,500	$ 26,999

Debt Coverage Ratios (DSCR)

Include PTC in DSCR Calc?		YES
Actual Min.	0.59	

Equity Participant	Project Stage: Construction	Project Stage: Operations	Developer Fees Recipient
Developer	100.0%	30.0%	
Tax Investor		50.0%	
Other		20.0%	
*	100.0%	100.0%	0.0%

The specific debt parameters are handled in the sections below.

Financing Terms - Construction Financing and Permanent Financing

In this section of Table 1, the user can specify debt terms as follows:

- Construction Financing - The user can specify the interest rate applied during the term of the construction loan. Interest During Construction is calculated in Table 3, using either the Default or User-Defined Drawdown and Debt/Equity Schedules.
- Permanent Financing - Senior Debt and Subordinated Debt - The user can specify the "mortgage type" loan parameters including:
  - The Term of the loan
  - The fixed interest rate
  - The number of years the "Interest-Only" payments are made during the initial term of the loan
  - The annual Financing Fees

The user may also enter Terms for Senior Debt and Subordinated Debt in the Annual Inputs Table, where options are provided to override the:

- Annual interest rate
- Interest only payments
- Accelerated principal repayment schedules as a percentage of the initial debt balance or in ($000)/year.

For the purposes of calculating debt coverage ratios, the coverage ratio for Senior Debt is calculated assuming funds available to cover debt including all expenses and Subordinated Debt Costs.

Sources of Capital

A summary of sources of capital for the project is provided in this section. The figure below shows these amounts. Sources are shown for the total project, and for the each investor's percent interest in the project.

Depreciation

EconExpert uses the 'Deferral Method' of Generally Accepted Accounting Principles (GAAP) for all Book Analyses including the Income Statement, Cash Flow Statement and Balance Sheet in Table 11. Depreciation is calculated using the cost basis of the plant (Capital Investment minus working capital, debt reserves and land). In this section of Table 1, the user specifies the percentage of the original plant Cost Basis that is depreciated for Cash Tax and for Book Tax purposes. Depreciation for cash taxes is calculated using IRS Modified Accelerated Cost Recovery (MACRS) depreciation schedules. Book depreciation uses Straight-Line Methods. Both methods prorate depreciation for partial operations in the first year and accelerate capture of depreciation in the last year of operation if the project is retired before the end of the depreciation life. Deferred taxes are calculated by the model based on the difference between book and cash taxes, resulting from the differences between these two depreciation calculations.

In addition to the six standard (5, 7, 10, 15, 20 and 30 years) MACRS depreciation Classes that are programmed in the model, the user may select from two additional categories that can be defined by the user. To use either or both of these categories, first name the category in the unprotected cells titled "User Defined in Table 11" and then specify the percentage of the tax basis to be depreciated in each of your user defined categories. Next from the NAVIGATE menu select:

NAVIGATE Results Tables Table 13 Depreciation

In the shaded cells, specify the amount (in decimal fraction 0.100 = 10.0%) to be depreciated in each year such that the total sums to 1.000 (= 100.0%).

Figure 21 - User Defined Depreciation Schedules in Table 13 Depreciation

		1	2	3	4	5
Year		2009	2010	2011	2012	2013
Months Applicable During Year		10	12	12	12	12
Schedules for Capital Investment Costs		Return to Depreciation Section of Table 1 Global Inputs				
BOOK Depreciation Schedules - Straight Line	Sum					
5 Year SL	1.000	16.7%	20.0%	20.0%	20.0%	20.0%
10 Year SL	1.000	8.3%	10.0%	10.0%	10.0%	10.0%
15 Year SL	1.000	5.6%	6.7%	6.7%	6.7%	6.7%
20 Year SL	1.000	4.2%	5.0%	5.0%	5.0%	5.0%
30 Year SL SL	1.000	2.8%	3.3%	3.3%	3.3%	3.3%
Cash Tax - MACRS - Mid-Year Convention (Capture balance in last year of life if Project Life is Less then DepreciationLife)						
3 Year	100.0%	33.3%	44.5%	14.8%	7.4%	
5 Year	100.0%	20.0%	32.0%	19.2%	11.5%	11.5%
7 Year	100.0%	14.3%	24.5%	17.5%	12.5%	8.9%
10 Year	100.0%	10.0%	18.0%	14.4%	11.5%	9.2%
15 Year	100.0%	5.0%	9.5%	8.6%	7.7%	6.9%
20 Year	100.0%	3.8%	7.2%	6.7%	6.2%	5.7%
30 Year SL	100.0%	1.6%	3.2%	3.2%	3.2%	3.2%
Cash Tax - MACRS - Mid-Quarter Convention - Placed in Service: 1st Quarter (Capture balance in last year of life if Project Life is Less then Depreciation Life)						
3 Year	100.0%	58.3%	27.8%	12.4%	1.5%	
5 Year	100.0%	35.0%	26.0%	15.6%	11.0%	11.0%
7 Year	100.0%	25.0%	21.4%	15.3%	10.9%	8.8%
10 Year	100.0%	17.5%	16.5%	13.2%	10.6%	8.5%
15 Year	100.0%	8.8%	9.1%	8.2%	7.4%	6.7%
20 Year	100.0%	6.6%	7.0%	6.5%	6.0%	5.5%

NOTE: The calculated unleveraged IRR may change slightly (usually by less than 0.1%) as a function of changes in Project Equity. This can occur when you select the "Factor" option for calculating property taxes or insurance costs, which when carried through to the unleveraged analysis are tied to the cost basis, which includes interest during construction and so has a dependency on the amount of debt assumed. This effect is very minor and will not be observed if annual inputs or only a fixed ($000)/yr amount are entered for Property Taxes and Insurance costs.

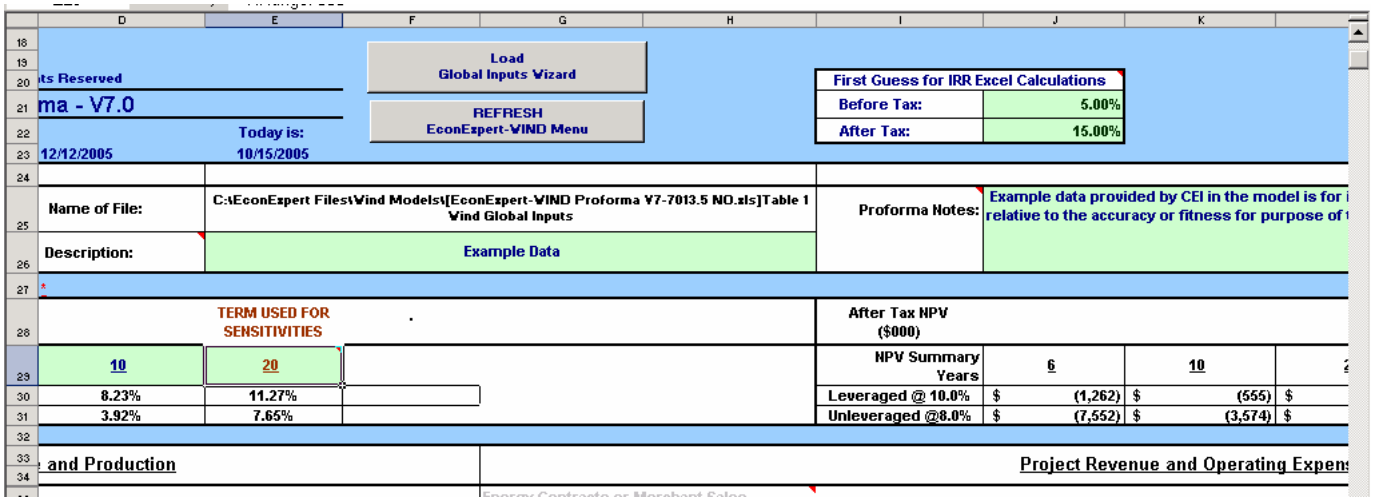
Calculation of IRR and the IRR Guess

Calculation of the project's Internal Rate of Return (IRR) is an important analysis feature in EconExpert-WIND. The IRR (and Net Present Value - NPV) are summarized at the top of Table 1 where you can continuously view how they react to changes in Inputs to Table 1.

Microsoft Excel uses an iterative technique for calculating IRR. The guess is a number that you guess is close to the result you expect for the IRR. Starting with guess, the IRR calculation cycles until the result is accurate within 0.00001 percent. If IRR can't find a result that works after 20 tries, the #NUM! error value is returned. In most cases you do not need to provide guess for the IRR calculation. If the guess is omitted, it is assumed to be 0.1 (10 percent). If the IRR result gives the #NUM! error value, or if the result is not close to what you expected, try again with a different value for guess.

The IRR Guess is entered in Column I, just above Table 1.

Figure 22 - Table 1 Wind Global Inputs - The IRR Guess



Note that the IRR Summary Table at the top of the Global Input sheet allows the user to specify what IRR Terms should be studied. The third input column of this table is especially important because it specifies the IRR Term that will be used in EconExpert-WIND's Automated Sensitivity Analyses.

B) Table 1C Annual Inputs

Annual Inputs apply only to a given year in the life of the project. You can use Annual Inputs any time that you would like to more precisely model a variable than can be accomplished using Table 1 Global Inputs. Examples of how you can use Annual Inputs to Table 1C to perform custom calculations include:

- Varying generation or losses year over year
- Forward electric price curves
- Customized debt including:
  - Floating Interest Rates on Debt
  - Accelerated or Deferred Principal Payments (Sweeps) tied to the Debt Coverage Ratio
  - Interest only payments
  - Lump sum principal repayments

- Modeling of a specific contracts or agreements for
  - Power Purchase Agreements.
  - O&M services (LTSA) agreements
- Modeling of specific gearbox failures
- Use of the User-Defined Fields that permit completely flexible customization of the model

Any non-zero entry is read as an Annual Input and included in the calculations in the model. If the cell is blank or a value of zero '0' appears in the cell, the corresponding Global Input will be used. If it is desired to enter a '0' for Annual Input, use a very small non-zero entry such 0.0000001, and the value 0 will be used in the model, overriding any entry from Global Inputs. Note that only years with entries will override Global Inputs – allowing the user to revert back to the escalating economic item, if desired.

Table 1C is range protected, allowing you to enter data ONLY into green shaded Input cells. When a non-zero entry appears on a shaded cell, the format of that cell will change to **Bold Red Text on a Yellow Background** indicating that data is present and used by the model.

Table 1C is organized into sections associated with each class of input categories and generally follows the organizational architecture of the Global Inputs sheet. The columns to the right in Table 1C each represent a project year, with Column F used for the first year of the project life. You can locate a specific Input Category in Table 1C by either scrolling through the table, or by using the NAVIGATE Feature on the Command Menu. Table 1C is organized in the following sections:

- Economic Factors – The annual GNP deflator
- Wind Farm Performance – Production, losses, and capacity factor
- Energy Contracts or Merchant Sales - Period energy consumption
- Energy Price During Each Period - Energy pricing by period
- Other Revenues - RECs, plus four user-defined revenue fields

- Variable O&M – Variable Costs and purchased power
- Fixed O&M – Warranty and post warranty costs
- Other O&M and Spare Parts – User-defined inputs from Table 1, plus property tax and insurance
- Royalties and Land Lease Equivalents – Lease payments to land owners or developers
- User Defined Additional Annual Expenses – 3 user-defined expense fields
- Major Maintenance – Purchase of spare parts and O&M reserves

- Working Capital – Options for total working capital or Accounts Receivable and Payable Days
- Debt Service - Custom interest rate and debt payment schedules
- Income Taxes, Depreciation and Dividends – Annual depreciation, incomes taxes, tax credits, and dividends
- Corporate Stock Performance

Note that you can also enter formulas into annual input cells. These formulas can be linked to other parts of EconExpert-WIND, to sheets that you insert into the model, and to sections at the bottom of each table that are available for you to perform your own calculations.

Results generated using Annual Inputs entries to Table 1C will either override results produced from a corresponding entry to Table 1, or will be added to those results. Examples of specific inputs where results are added rather than overriding Global Inputs include:

- User Defined Revenue Sources (four categories that you can define)
- User Defined Expenses (three categories that you can define)
- Additional Tax Deductions
- Adjustments to State and Federal Depreciation Schedules
- Additional State Taxes
- Additional Federal Taxes
- After-tax Dividends

All of the other inputs will override Table 1 Inputs in (AND ONLY IN) the years that non-zero values appear in Table 1C. If Annual Inputs are entered in every year of the project life the corresponding Global Inputs entered in Table 1 will be totally overridden and will not be used in the analysis. If Annual Inputs are only entered in some years, then the Global Inputs will be used in all other years, applying escalation where appropriate.

If Annual Inputs are entered into any cell in Table 1C, the respective "Input Indicator" will show the value **9999999** (Column C), along the left side of the respective inputs which will also be reformatted to **Bold Red on Yellow Format**. If there are no entries in a row, then a red **0** will appear. A **0** advises you that NO Annual Inputs have been entered in that row. A **9999999** indicates that an Annual Input has been entered in one or more years over the project life, even if such entries do not appear on your current screen view. In this case, the corresponding input to Table 1 will also be reformatted to **Bold Red** and a red warning labeled **Annual Inputs** will also appear near to the input in Table 1, advising you that an Annual Input value has been entered and that the corresponding Global Input will be overridden. The Status Sheet will also provide a notice that this has occurred.

A feature is provided on the EconExpert-WIND UTILITIES Menu that allows you to clear and reset the Annual Input Table to all '0's, meaning that none of the inputs to Table 1 will be overridden. To RESET the Annual Inputs Table from the UTILITIES menu select:

Save or Reset Inputs CLEAR Annual Inputs

Note that if you do this, the current Annual Inputs will be lost. You will be provided with a warning. If desired, you can save the Annual Inputs before Resetting them. This can be initiated from this same menu option.

PLEASE NOTE: Cost entries are input to Table 1C in CURRENT $. This means that the cost and revenue entries to Table 1C will not be impacted by escalation rates entered elsewhere in the model, and fixed values will not be impacted by partial year operation. The values will be used by the model as entered.

Most of the inputs included in Table 1C are self explanatory, and all are accompanied by Help Comments that describe the purpose and function of that input. Several of the specific inputs to Table 1C provide unique functionality and are individually described below.

Economic Factors

You can vary the annual GNP escalation rate by entering non-zero values into this section. In the example provided, the GNP Escalation Rate of 2.5% entered in Table 1 will be overridden in years

1, 2, and 3 by the amounts 3.0%, 3.5% and 4.0% respectively. In succeeding years, inflation will default back to the Global Inputs rate of 2.5% if no entries are provided for those years.

Figure 23 - Table 1C Annual Inputs - GNP Escalation Rate

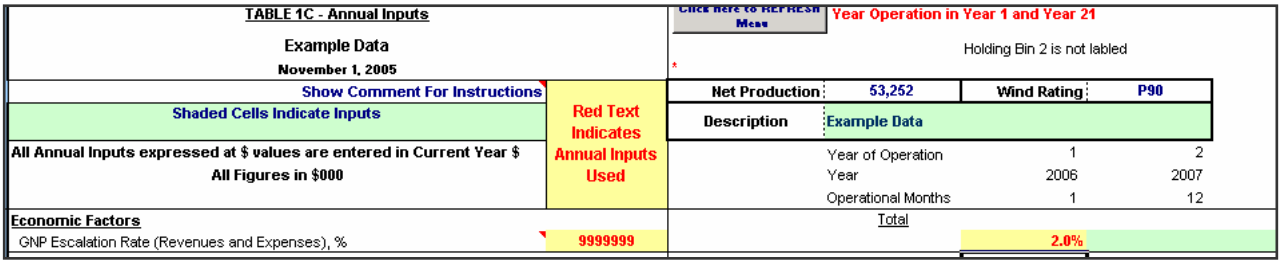
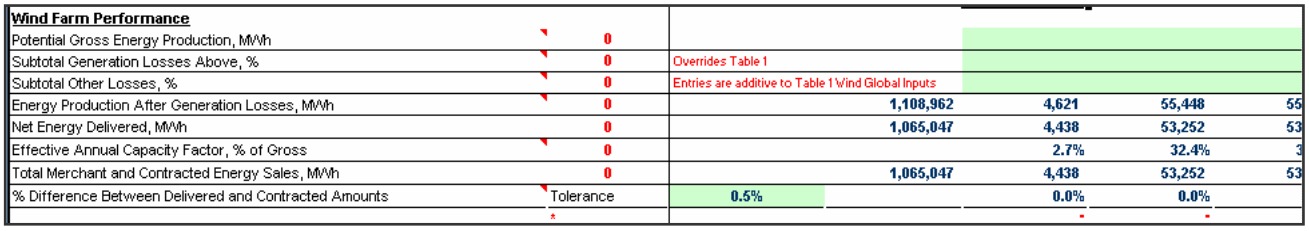


TABLE 1C - Annual Inputs		Click here to REFRESH Menu	Year Operation in Year 1 and Year 21			
Example Data			Holding Bin 2 is not labled			
November 1, 2005			*			
Show Comment For Instructions	Red Text Indicates Annual Inputs Used		Net Production	53,252	Wind Rating	P90
Shaded Cells Indicate Inputs			Description	Example Data		
All Annual Inputs expressed at $ values are entered in Current Year $			Year of Operation	1	2	
All Figures in $000			Year	2006	2007	
			Operational Months	1	12	
Economic Factors				Total		
GNP Escalation Rate (Revenues and Expenses), %	9999999			2.0%		

Wind Farm Performance

Table 1C allows you to input annual values for Potential Gross Energy Production and Generation Losses. In this section you can alter the amount of power generated and delivered.

Figure 24 - Table 1C Annual Inputs – Wind Farm Performance



Wind Farm Performance						
Potential Gross Energy Production, MWh	0					
Subtotal Generation Losses Above, %	0	Overrides Table 1				
Subtotal Other Losses, %	0	Entries are additive to Table 1 Wind Global Inputs				
Energy Production After Generation Losses, MWh	0		1,108,962	4,621	55,448	55
Net Energy Delivered, MWh	0		1,065,047	4,438	53,252	53
Effective Annual Capacity Factor, % of Gross	0			2.7%	32.4%	3
Total Merchant and Contracted Energy Sales, MWh	0		1,065,047	4,438	53,252	53
% Difference Between Delivered and Contracted Amounts	Tolerance	0.5%		0.0%	0.0%	
	*			-	-	

- **Potential Gross Energy Production:** This value matches the entries on Table 1 in the Wind Rating Profile section.
- **Subtotal Generation Losses Above:** This value will replace the total generation losses specified on Table 1.
- **Subtotal Other Losses:** This value will add to the losses specified above or on Table 1.
- **Energy Production After Generation Losses:** This line calculates the generation from Table 1 or from the Potential Gross Energy Production if a value is entered for that year, and deducts the generation losses for each year from the values entered on Generation Losses lines above, or from Table 1 is no values are entered.
- **Net Energy Delivered:** The Net Energy Delivered also considers the Other Losses.

Energy Contracts or Merchant Sales

For each of the PPA Pricing Periods determined on Table 1, the user can modify the annual production amount. On Table there were options for up to 4 different pricing options for each PPA Period. Those same options exist on Table 1C.

IMPORTANT NOTE: If you have more than one PPA or pricing structure (called Customer in the model) for a given year, if you enter one production value in this section you must provide all of the desired Periods for that year. Otherwise the 4th Customer in each PPA term will be the default recipient of any excess production.

Energy Price During Each Period

For each of the PPA Pricing Periods determined on Table 1, the user can modify the annual PPA price. On Table there were options for up to 4 different pricing options for each PPA Period. Those same options exist on Table 1C.

Other Revenues

In addition to revenues realized from sales of Energy, the user may specify other annual income sources in Table 1C which can include:

- Renewable Energy Credits
- Other variable energy sales ($/MWh)
- Power sales based on capacity ($/MW)
- Additional Revenue Sources - The user may input additional income sources into any of 4 User-Defined Categories, in any year of the project life. Values are input in Current dollars and are not escalated by the model. These amounts will be added to other revenue sources calculated from Table 1 Inputs. The labels are user-defined and will appear in the corresponding tables and reports throughout the model. These titles will be accessible for Sensitivities and will be updated on the EconExpert-WIND menu when the menu is refreshed.

Figure 25 - Table 1C Annual Inputs - Other Revenue Sources

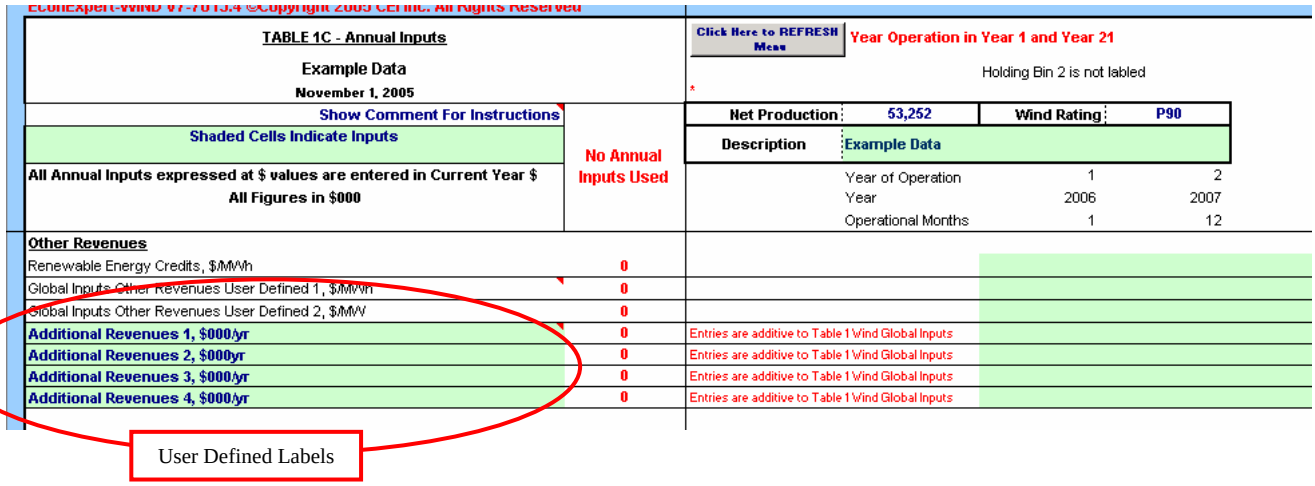


TABLE 1C - Annual Inputs
Example Data
November 1, 2005
Show Comment For Instructions
Shaded Cells Indicate Inputs
All Annual Inputs expressed at $ values are entered in Current Year $
All Figures in $000
No Annual Inputs Used
Click Here to REFRESH Menu
Year Operation in Year 1 and Year 21
Holding Bin 2 is not labled
Net Production
53,252
Wind Rating
P90
Description
Example Data
Year of Operation
Year
Operational Months
Other Revenues
Renewable Energy Credits, $/MWh
Global Inputs Other Revenues User Defined 1, $/MWh
Global Inputs Other Revenues User Defined 2, $/MW
Additional Revenues 1, $000/yr
Additional Revenues 2, $000/yr
Additional Revenues 3, $000/yr
Additional Revenues 4, $000/yr
Entries are additive to Table 1 Wind Global Inputs
User Defined Labels

Variable Operating Costs

Variable Operations and Maintenance (O&M) costs are dependent on gross annual electric power production, before the losses are reduced. There are two user-defined Variable O&M Inputs to Table 1 which have corresponding Table 1C entries. Both categories offer entries in $/MWH. The user can name these categories in Table 1 and the names will be carried into the various tables and charts throughout the model. The calculated annual variable O&M costs will be the sum of these two entries and will reflect the annual plant capacity factor.

Fixed Operating Costs
Fixed Operations and Maintenance (O&M) costs are not dependent on annual net generation. Fixed O&M Inputs are defined in Table 1, and are structured to handle a Warranty, Post-Warranty and another period of costs. The user can name these categories in Table 1 and the names will be carried into the various tables and charts throughout the model.

Other O&M and Spare Parts
Other O&M offers four independent categories for fixed O&M costs, set up so that the user can name each category in Table 1.

Also in this section the user can specify the annual Spare Parts Consumption rate. The model is structured to have a one time Spare Parts Purchase, which is only specified on Table 1.

Lastly in this section the user can specify annual Property Tax and Insurance costs.

Royalties and Land Lease Payments
The two entries for the lease payment will override any payments entered on Table1, including the variable costs or minimum payments.

User Defined Additional Expenses
The user may input Additional Annual Operating Expenses in any of three User-Defined Categories. Values are input in Current dollars and are not escalated. These amounts are added to other expenses calculated from Table 1 Inputs and from the items listed above. These costs can be fixed or variable, depending how the user defines them. The titles entered will appear in the various reports throughout the model. The labels input by the user will appear in the corresponding tables and reports throughout the model. Note that the user may also define the titles for these User-Defined Categories. These titles will be accessible for Sensitivities and will be updated when on the EconExpert-WIND Menu is refreshed.

Figure 26 - Table 1C Annual Inputs - Fixed and Variable O&M Inputs

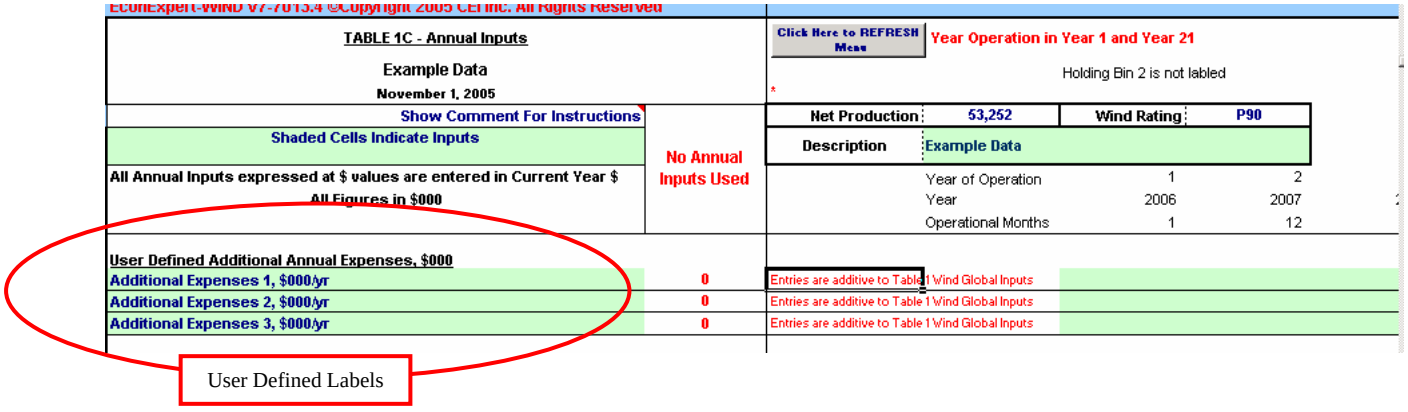


TABLE 1C - Annual Inputs
Example Data
November 1, 2005
Click Here to REFRESH Menu
Year Operation in Year 1 and Year 21
Holding Bin 2 is not labled
Show Comment For Instructions
Shaded Cells Indicate Inputs
All Annual Inputs expressed at $ values are entered in Current Year $
All Figures in $000
No Annual Inputs Used
Net Production
53,252
Wind Rating
P90
Description
Example Data
Year of Operation
Year
Operational Months
User Defined Additional Annual Expenses, $000
Additional Expenses 1, $000/yr
Additional Expenses 2, $000/yr
Additional Expenses 3, $000/yr
Entries are additive to Table 1 Wind Global Inputs
User Defined Labels

In all cases note that the entries to Table 1C are in Current $ (i.e. include escalation).

Major Maintenance
Purchase of Spare Parts is one time occurrence, but this section offers the user the opportunity to enter values in multiple years. In this item the user would enter the years that the purchases would occur.

The Operations and Maintenance Reserve can be entered in current dollar, versus month-equivalent as is offered on Table 1.

Debt Service
The user can specify Annual debt terms for Primary and Subordinated Debt in Table 1C including:

- Principal Repayment Schedule. The user can input the annual percentage of the initial debt balance, or the annual 1000$ amount of principal to be repaid in any year during the life of the subject loan. This section can be used to model accelerated or deferred principal repayments, including sweeps and extension of principal repayments. Amounts entered here will override the standard mortgage-style principal repayment schedule calculated based on Table 1 Inputs. Note that Principal Repayments specified in this section will take precedence over Interest-Only Payments if such both options are selected in the same year. If payments are not entered in all years, the selected mortgage-type repayment schedule specified in Table 1 will be used in the remaining years until the entire principal balance is paid, or until the end of the debt term. Any residual principal will be repaid as a balloon payment in the last year of the debt term.
- Interest Rates. The user can input the Annual effective interest rate during any year in the life of the subject loan. This section can be used to model variable rate loans or those linked to indices. Amounts entered here will override the standard mortgage-style fixed interest rates entered in Table 1.
- Interest-Only Payments. The user can specify Interest-Only Payments in any year during the life of the loan by entering a 1 in the year that the Interest-Only Payments would apply. Note that Principal Repayments specified above will take precedence over Interest-Only Payments if both options are selected in the same year.

Income Taxes, Depreciation and Dividends
The user can enter Annual Depreciation Rates, Additional Deductions from State and Federal Taxes, State and Federal Tax Rates, Additional Tax Amounts and annual After Tax Dividends in any year that they might occur. Note that Additional Deductions, Additional Taxes and After-Tax Dividends do not override amounts input to Table 1 Global Inputs.

The user can enter Dividend Amounts to be withdrawn from the project After-Tax as a percentage of after-tax net income or as a set amount. If both entries are made they will be summed. The resulting dividends are deducted from the net income after-tax and will result in a reduction to the project's IRR and NPV after-tax.

Corporate Earnings without Project and Shares of Company Stock Outstanding
EconExpert-WIND includes analysis of predicted impacts of Share Dilution and Net Income on the price of the Owner's stock. These calculations are performed based on an assumed baseline stock price without the project, the baseline projected corporate earnings profile and the baseline number of shares outstanding. The resulting current price earnings ratio is applied to estimate future stock performance by calculating the resulting accretion/dilution of shares and the impacts of net income from the project.

Using Table 1C, the user may specify the annual effective Price Earnings Ratio of the stock (reflective of changing anticipated market conditions), forecasted annual Earnings/Share expressed in Current $ and the annual number of Corporate Shares Outstanding. Amounts entered here will override inputs to Table 1.

If an annual profile for Corporate Shares Outstanding is entered, it should be input for all succeeding years during the project life as the model will revert to Table 1 entries if a "zero-valued" input is read in a year succeeding a change in the number of shares issued.

C) Table 1D - Data Conversion Sheet

The Data Conversion sheet provides additional flexibility to utilize energy pricing and performance in up to 24-Periods defined by the user. To link this sheet with the rest of the model the user must select the option on the Utilities Menu to link the aggregated data in Data Conversion Sheet to the model by formula reference to the Annual Inputs Sheet. In the Data Conversion Sheet, there are **annual** entries for:

- Hours in Each Period (this is where you enter the Period Names)
- Gross MWH Energy Production
- Curtailment Risk % (Reduction in Gross Production)
- Energy Sales for each PPA Term
- Revenue per MWH for each PPA Term

Plant Capacity and capacity factors mathematically averaged and referenced in Table 1C with formulas linked to the Data Conversion Sheet.

Input rows are unprotected and **shaded in green**. Period 24 is calculated by difference to ensure that the total number of hours in a full calendar year is equal to 8760 (note that leap years are neglected).

Please note the following points when you use this feature:

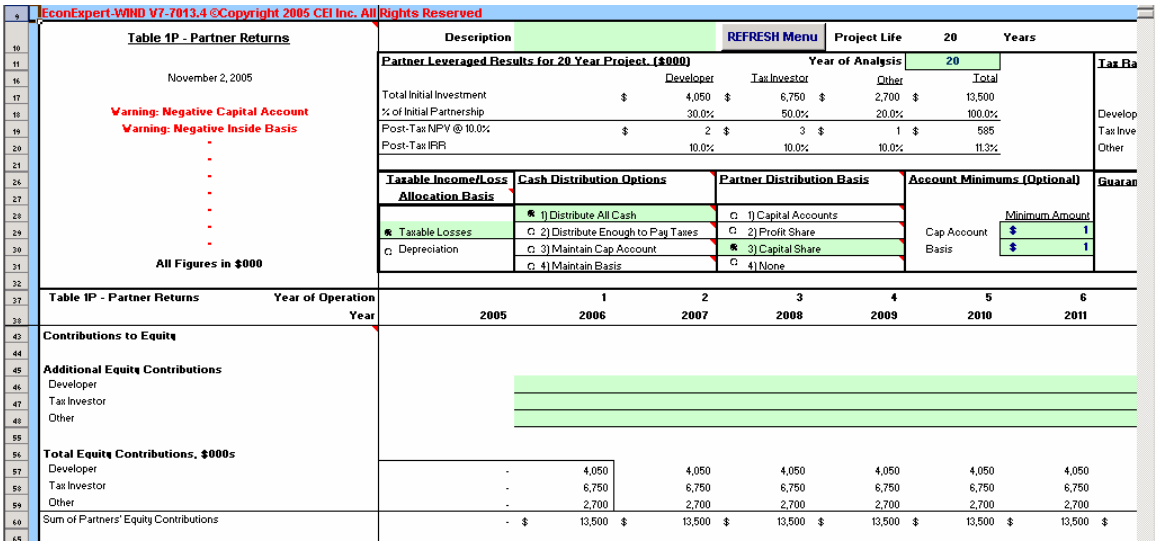
- All data is entered in Current $.
- Data can be copied and pasted from other sources. The pasted data should be pasted as VALUES from the source data file, or can be linked using formulas.
- Aggregated results will be referenced by formulas in the Annual Inputs Sheet, overwriting the current Annual Inputs and overriding Global Inputs in the years that non-zero values are transferred.
- If block period data is utilized, it is recommended that the user enter that data for the whole project life. If the data is not available for the whole project life, use formulas in the cells to project the data over the entire project life. Otherwise, where blank cells or zeros are transferred to the Annual Inputs Sheet, the Global Inputs data will be applied.

D) Table 1P – Partner Returns

Note that in more recent versions of EconExpert-WIND, partnership analysis is performed in a separate "Partnerships Module". This module includes all of the features of the previous version, and many new capabilities. A separate User's Manual is provided for the EconExpert-Partnerships Module.

In earlier versions of EconExpert-WIND, Table 1P Partner Returns and Table 11P Partnership Financials are architected to model various schemes that might be written into a partnership agreement. This module in the model is designed to be able to model most partnership arrangements, but still provide some automated calculations to support those arrangements. Also, proper capital account tracking, and individual tax treatments are used. Lastly, please refer to the Glossary at the end of this section for any terms that are unfamiliar to you.

Figure 27 - Table 1P Partner Returns


EconExpert-WIND V7-7013.4 ©Copyright 2005 CEI Inc. All Rights Reserved
Table 1P - Partner Returns
November 2, 2005
Warning: Negative Capital Account
Warning: Negative Inside Basis
All Figures in $000
Description
REFRESH Menu
Project Life 20 Years
Partner Leveraged Results for 20 Year Project, ($000)
Year of Analysis 20
Developer
Tax Investor
Other
Total
Total Initial Investment $ 4,050 $ 6,750 $ 2,700 $ 13,500
% of Initial Partnership 30.0% 50.0% 20.0% 100.0%
Post-Tax NPV @ 10.0% $ 2 $ 3 $ 1 $ 585
Post-Tax IRR 10.0% 10.0% 10.0% 11.3%
Taxable Income/Loss Allocation Basis
Taxable Losses
Depreciation
Cash Distribution Options
1) Distribute All Cash
2) Distribute Enough to Pay Taxes
3) Maintain Cap Account
4) Maintain Basis
Partner Distribution Basis
1) Capital Accounts
2) Profit Share
3) Capital Share
4) None
Account Minimums (Optional)
Minimum Amount
Cap Account $ 1
Basis $ 1
Table 1P - Partner Returns
Year of Operation
Year
2005 2006 2007 2008 2009 2010 2011
Contributions to Equity
Additional Equity Contributions
Developer
Tax Investor
Other
Total Equity Contributions, $000s
Developer - 4,050 4,050 4,050 4,050 4,050 4,050
Tax Investor - 6,750 6,750 6,750 6,750 6,750 6,750
Other - 2,700 2,700 2,700 2,700 2,700 2,700
Sum of Partners' Equity Contributions - $ 13,500 $ 13,500 $ 13,500 $ 13,500 $ 13,500 $ 13,500

1) Partnership Overview and Disclaimer

Partnerships are pass-through entities and therefore all items of partnership income, expense and depreciation are reflected on each partner or investor's separate capital account. This is in contrast to the tax treatment of a regular corporation, where all items of income, expense, and tax liability remain at the corporate level. Because of the complexities that arise when multiple parties form a partnership or limited liability partnership to own a wind power project, CEI provides additional calculations to aide the user in understanding the financial returns to each partner.

These calculations assume that all partners are general partners versus limited partners, so that special allocations may be incorporated.

Table 1P offers inputs to allocate taxable income and losses, tax credits and cash distributions to each partner. Each partner's capital account and basis are tracked

throughout the lifetime of the project, as well as each partner's estimated tax liability, cash flows, and after-tax returns. Table 11P lays out the partnership financial statements, and most importantly calculates cash availability for distribution.

While these spreadsheets are tools that allow you to model partnership financials and individual partner returns, whatever special allocations or distributions are assumed, you should always review those allocations and distributions with your tax advisor so that they meet US tax Code, and are allowed in your partnership agreements.

There are two methods to extract cash out of the partnership to each partner. First, there are cash distributions, which withdraw cash from a partner's capital account.

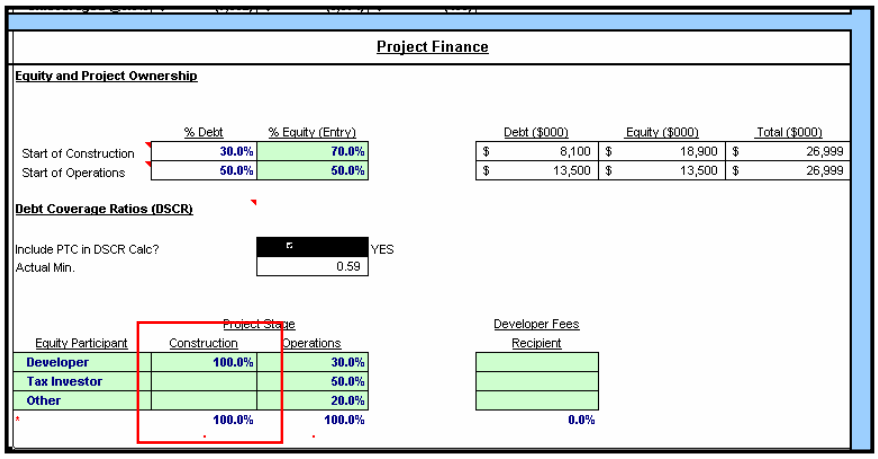
Second, there are guaranteed payments to partners that do not decrease the partner's capital account, but might be taxed differently depending on the partner's situation.

2) Defining Partners

Initial Capital Contribution

Up to three partners can be defined on Table 1 Wind Global Inputs, with their initial capital contributions also defined as a percentage of the total equity investment.

Figure 28 – Table 1 Wind Global Inputs – Defining Partners



For the purposes of a partnership, the percentage specified for Operations is the initial percentage invested in the partnership. If a partner is given interest in the partnership but does not contribute any capital, enter the partner name in the space available but leave the initial contribution blank or enter zero.

The next version of the model will allow for investors to bring property to the partnership, as is done in many circumstances. Property contributions are not enabled in this version as the US tax Codes is written differently for partners who contribute property instead of cash. For simplicity sake, we focused only on cash contributions to the partnership, and assume that each partner enters the partnership at the same time.

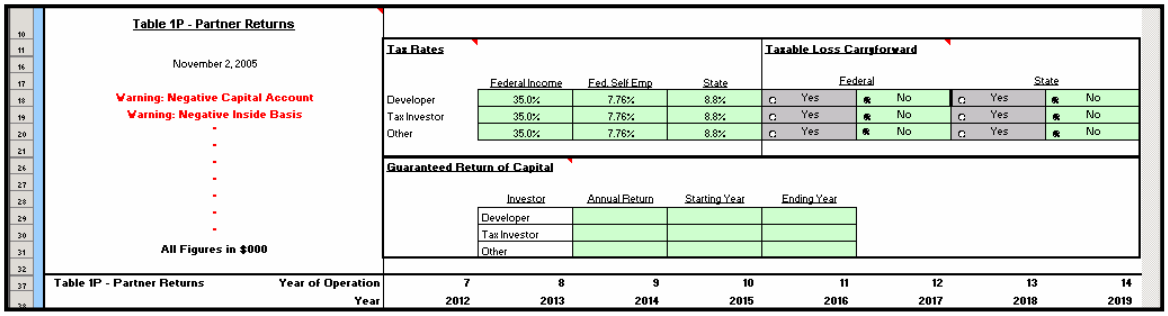
Additional Annual Contributions

Once the partners are defined with their initial contributions, additional annual contributions can be inserted in Table 1P Partner Returns on lines 46-48. The total amount contributed by each partner is summarized directly below on lines 57-60.

Tax Rates

Partner specific federal income, federal self-employment, and state income tax rates can be specified in the table located in cells K18:M20. Note that self-employment taxes apply to guaranteed payments and will be calculated on ordinary income for general partners that are individuals, partnerships, or LLCs. Corporations do not pay a self-employment tax.

Figure 29 – Table 1P Partner Returns – Tax Rates



In the Figure above please note that the Pane is frozen, which is why the Tax section appears next to the Warnings.

The tax rates are applied on lines 263-406 in the cash flow calculations for each partner.

Taxable Loss Appetite

Additionally, partners have their own tax appetite, which is called the "External Partner Taxable Income" in Table 1P. If a partner has any ability to utilize taxable losses at the federal or state level, simply specify "No" for the "Taxable Loss Carry Forward". If their tax appetite is limited, specify "Yes" for the "Taxable Loss Carry Forward" and then enter the federal or state tax appetite in rows 179-192. These entries are values that are outside of the modeled wind project. If the partner's tax appetite is unlimited, you can leave these entries blank and if no taxable loss carry forwards are assumed then all tax benefits will be assumed in the current year.

NPV and IRR Calculations

At the top of Table 1P, the after-tax IRR and NPV for each defined partner is shown, along with their initial capital contributions and Capital Share of the project. The calculations for the NPV and IRR are t the bottom on Table 1P, from lines 407-420. The cash flows for each partner are detailed on lines 263-406.

3) Partnership Financial Statements

On Table 11P – Partnership Financial income statement, balance sheet and cash flows are provided to match the partner allocation specifications on Table 1P – Partner Returns. The following statements compare the differences between Table 11 – Financials ("the project") and Table 11P – Partnership Financial ("the partnership"):

Income Statement
First, the partnership income statement lacks any tax expense. Second, depreciation for the partnership is based on Tax depreciation, while Book depreciation is used to the project financials.

Cash Flow
Under Cash from Operations, the differing depreciation schedules appear again. The Cash from Investing line items are identical on both financials, unlike Cash from Financing which has several varying items. The partnership financials list the contributions and distributions, while the project financials only list the changes in equity contributions.

Balance Sheet
There are several differences in the project and partnership balance sheets. On the partnership balance sheet, under Assets, the cash amount will vary because cash is being pulled out of the partnership and distributed to the partners. Next, the Property, Plant & Equipment will differ because of the different depreciation amounts.

Under Liabilities, Deferred Taxes appear on the project financials, but are not relevant to partnership financials.

Instead of Equity on the project financials, there are Partners' Capital Accounts on the partnership financials. Likewise the balances, contributions and distributions to and from the capital accounts are detailed on the partnership financials where the retained earnings exist on the project financials.

Figure 30 – Comparison of Table 11 and Table 11P

Financial Statement Variation	Table 11 – Project Financials	Table 11P – Partnership Financials
Income Statement		
Depreciation	Used Book depreciation – usually straight line	Uses Tax depreciation – usually MACRS
Income Taxes, Tax Credits, Tax Deductions, Capital Gain Taxes	Used to calculate Net Income	Not shown or used to calculate Net Income
Cash Flow Statement		
Cash From Operations	Net Income reflects taxes and Book Depreciation, show Deferred Taxes, and typically uses straight line depreciation	Net Income does not reflect taxes and reflects Tax Depreciation, there are no deferred taxes, and typically uses MACRS depreciation

Cash from Investing	Identical to Table 11P	Identical to Table 11
Cash from Financing	Shows total Equity in the project	Shows Contributions and Distributions from Table 1P
Balance Sheet		
Assets	Cash stays in the project, and Book Depreciation is used for PP&E	Cash is pulled out of the partnership as defined on Table 1P, and Tax Depreciation is used for PP&E
Liabilities	Includes Deferred Taxes	Does not include Deferred Taxes
Equity/Capital Accounts	Tracks total Equity in project and treats Net Income as Retained Earnings	Tracks the sum of the Partners' Capital Accounts, as well as Contributions and Distributions from Table 1P

4) Allocations

There are many different ways partnership agreements can structure allocations of taxable income and loss. This model certainly does not handle all possible variations, but can handle many different types.

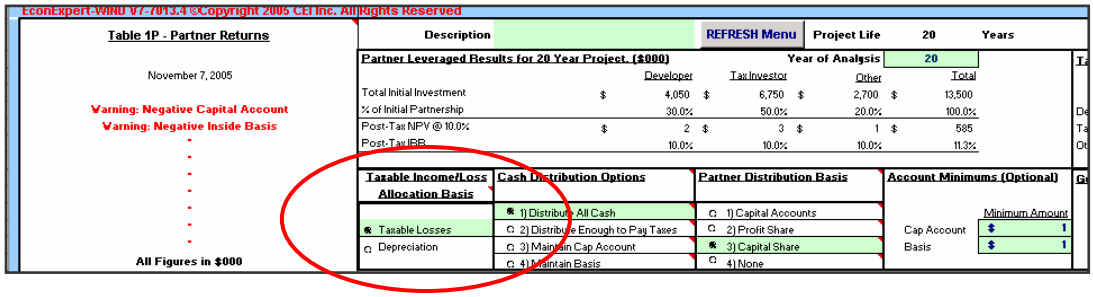
Taxable Income, Loss and Depreciation

The allocations available in Table 1P follow the typical allocations allowable under US partnership tax laws. While this model allows the user to allocate the economic items in any proportion, only your tax advisor can determine whether those allocations are allowable under US tax laws.

At the top of Table 1P, in cells C13:C14, you can elect to set the sheet in one of two modes:

- **Taxable Losses:** This mode allows the user to allocate Taxable Income and Taxable Losses separately, with depreciation included in the Taxable Losses Allocation.
- **Depreciation:** This mode allows the user to allocate Taxable Income/Losses separately from Depreciation.

Figure 31 – Table 1P – Partner Returns – Taxable Income Basis



Whichever mode is selected, the custom allocations for each year of the project are set in rows 94-106. At the beginning of each row the percent of initial capital contributed

is shown as a baseline. If no numbers are entered in these rows, the default values are these percentages. The Taxable Income or Taxable Income/Loss values entered in lines 96-98 are also used as the "Profit Share" values for cash distributions.

Suspended Losses

This model assumes that taxable losses, once assigned to a partner, will always be assigned to that partner regardless of the value of his capital account. If the amount of losses exceeds the partner's basis for that year, a "Suspended Loss" account is created and that excess loss is carried forward until there is sufficient basis for the partner to utilize the loss.

Tax Credits

Production Tax Credits (PTCs) do not directly affect partners' capital accounts. The user can set the allocation of PTCs on lines 113-115 on Table 1P. Again, while this model allows the user to allocate the PTCs in any proportion, only your tax advisor can determine whether those allocations are allowable under US tax laws. In this model the PTCs are figured into the tax calculations for each partner, beginning in row 472 and ending in row 672.

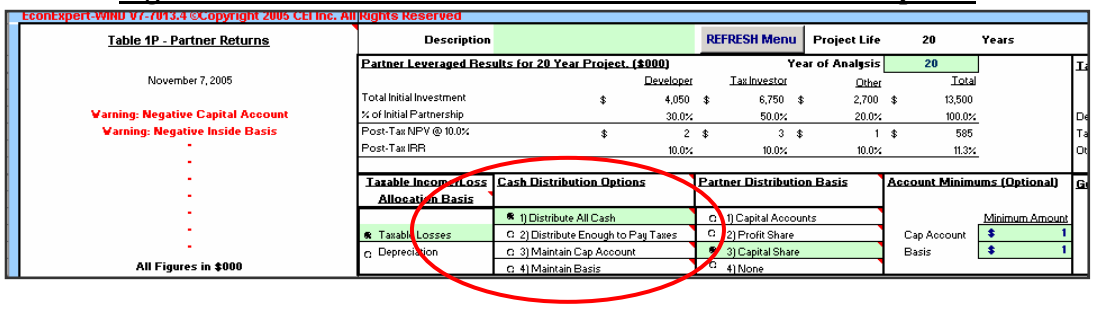
Distributions

There are several options for cash distributions in this model, and these options are explained in more detail below.

5) Cash Distributions Options

Once allocations of taxable income and loss are established, it must be determined how each partner will extract cash from the partnership. There are four options for determining the total amount of cash available for distribution. The cash available is calculated on Table 11P on the Cash Flow Statement, with the Distributions appearing on line 104.

Figure 32 – Table 1P – Partner Returns – Cash Distribution Options


EconExpert-WIND V7-7013.4 ©Copyright 2005 CEI Inc. All Rights Reserved
Table 1P - Partner Returns
November 7, 2005
Warning: Negative Capital Account
Warning: Negative Inside Basis
All Figures in $000
Description
REFRESH Menu
Project Life 20 Years
Partner Leveraged Results for 20 Year Project. ($000)
Year of Analysis 20
Developer
Tax Investor
Other
Total
Total Initial Investment $ 4,050 $ 6,750 $ 2,700 $ 13,500
% of Initial Partnership 30.0% 50.0% 20.0% 100.0%
Post-Tax NPV @ 10.0% $ 2 $ 3 $ 1 $ 585
Post-Tax IRR 10.0% 10.0% 10.0% 11.3%
Taxable Income/Loss Allocation Basis
Taxable Losses
Depreciation
Cash Distribution Options
1) Distribute All Cash
2) Distribute Enough to Pay Taxes
3) Maintain Cap Account
4) Maintain Basis
Partner Distribution Basis
1) Capital Accounts
2) Profit Share
3) Capital Share
4) None
Account Minimums (Optional)
Minimum Amount
Cap Account $ 1
Basis $ 1

Distribute All Cash

With this selection the model will automatically distribute the amount of cash available for the calendar year.

Distribute Enough to Pay Taxes

Once the project has a positive taxable income, partners will have a tax liability. Selecting this option distributes just enough cash to cover that tax liability. Additional cash distribution can then be determined using the Custom Distributions on lines 161-163 on Table 1P.

Maintain Cap Account
In some cases, either driven by partnership agreements or creditors, partners may have to keep a positive amount in their capital accounts. Selecting this option will determine whether or not distributions will lead to a negative capital account based on the given allocations, and suspend distributions until the time that the capital accounts will not go negative as a result of the distributions. In certain cases the accounts will be negative anyway because of the taxable losses. In these cases there will not be any distributions until the accounts are positive.

Maintain Basis
Similar to the above explanation for Capital Accounts, in some cases partners must attempt to keep positive basis. With this selection cash distributions will only occur up to the amount that will keep the basis positive, and in the case that the basis is already negative, no distributions will occur until the basis is again positive.

For both account maintenance options (i.e. maintain capital account and maintain basis), there is a Minimum Account Balance option whereby the user can set the minimum amount to exist in the capital account or inside basis, in case such an amount is specific in a partnership agreement.

The calculations for these options are performed in two locations – under each partner's capital accounts, and at the bottom of the table, in rows 718-831. The idea for all options is to maximize the cash distributed under the given constraints. The following section describes the supporting calculations for each option.

Distribute All Cash
With this option the model will look at current and future cash obligations and distribute only cash that will not be required to meet an obligation, given future cash flows. In rows 742-753, current and future cash sources and obligations are identified and compared, with the result being a current Cash Available for Distribution.

Distribute Enough to Pay Taxes
In rows 719-740 the model determines each partners' tax liability and distributes just enough cash, if available, to meet that liability.

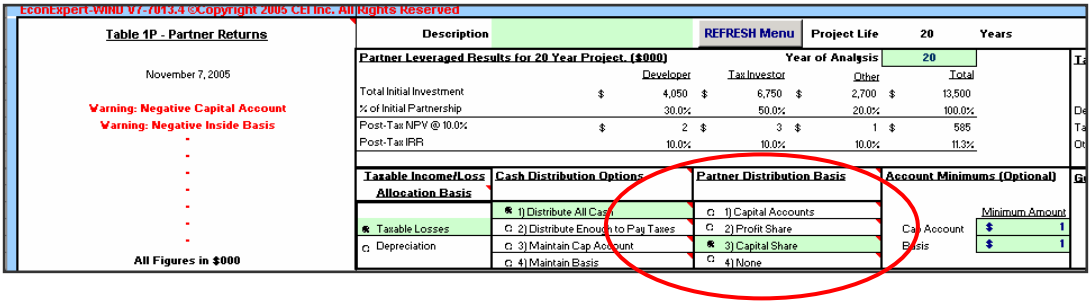
Maintain Cap Account and Basis
In rows 757-826 the model attempts to adjust distributions to maintain positive values in each partner's Capital Account or Inside Basis. In reality, if the partnership's net income is negative over time, the Capital Account might go negative even without any distributions. In other words, no matter what accounting strategy is taken, the partners might show negative Capital Accounts.

On the rows following each partner's Capital Account, there are a few rows of calculations that look at future reductions in Liabilities and Basis, and compare them against future Net Income and other positive effects on the Capital Account. Then, in rows 757-829, the model will determine how much cash can be distributed, factoring in the future outlook of the Capital Account and Inside Basis.

6) Cash Distribution Basis

Once the distribution strategy is formulated, keeping in mind any partnership obligations, the allocation of cash distributions to each partner can be automatically set up as per a partnership agreement. The four options as provided in this model are as follows.

Figure 33 – Table 1P – Partner Returns – Cash Distribution Basis



Capital Accounts

Capital Account values for each partner change yearly as allocations are made to reflect taxable income/loss allocations and/or cash distributions. In reality capital account values can change with more frequency (e.g. quarterly or monthly), but in this model all capital account changes are assumed to occur annually. By selecting this option, the end of year cash distributions will be paid to each partner proportionally according to their end-of-year Capital Account values.

Profit Share

Another option is to base the cash distributions on the designated profit sharing, which is defined in the Allocations section under Taxable Income, Loss and Depreciation

Capital Share

The third option is to set cash distributions to the amount of capital invested.

None

The last option is to only use custom distributions, which are done in lines 161-163 on Table 1P. Custom distributions can also be used if any of the Cash Distributions options except for Maximum Cash are selected, because there will be cash available that is not automatically distributed. If the partnership agreement contains language about preferred returns, then the user can put in formulas in these rows to reflect the preferred returns.

7) Guaranteed Payments

The language in the partnership agreement governs the flow of income and expense items through the partners' capital accounts as well as items such as guaranteed payments that are not capital account items. Guaranteed payments can either be a capitalized item or deductible for the partnership, depending on the nature of the payment, but are always a taxable event to the receiving partner.

Capitalized Guaranteed Payments

The model provides for two types of capitalized guaranteed payments, a Developer Fee and a Loan Guarantee Fee, both of which are found on Table 1 Wind Global Inputs, and both of which can be assigned to a partner or to an external party. In addition, both of these payments are one-time, capitalizable fees that represent a full-payment to the partner is the first year of the project, but are expensed over time to the partnership, as defined in the tax depreciation schedules on Table 1 Wind Global Inputs.

Developer Fee

The Developer Fee is part of the Project Development costs located in the Investment Costs section of Table 1 Wind Global Inputs. If the user elects to have the Developer Fee assigned to one or more of the partners, this assignment occurs in cells AA68:AA70 in the Project Finance section on Table 1 Wind Global Inputs.

Figure 34 – Table 1 Wind Global Inputs – Developer Fee

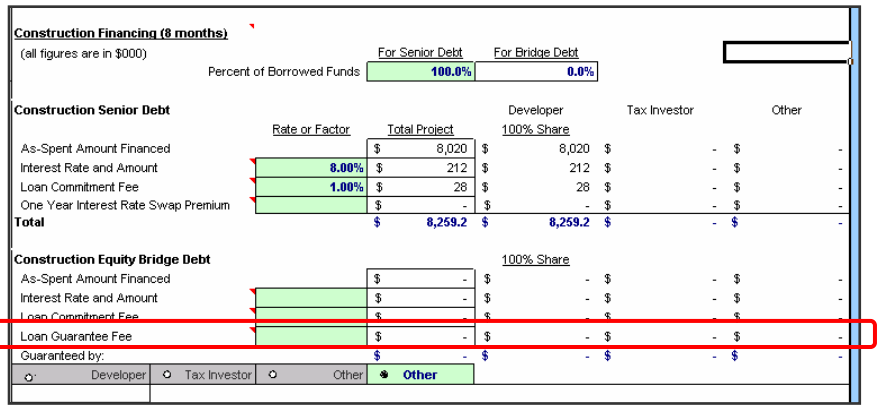
Investment Costs

		# of Turbines	15	
Phase 1 - Project Development				
(all figures are in $000)	Per Turbine Expenses	Other Expenses	Total Project (Not Escalated)	% of Subtotal
Developer Fee		$ 500	$ 500	30.6%
Met Stations		$ 35	$ 35	2.1%
Licensing / Permitting		$ 45	$ 45	2.8%
Legal		$ 25	$ 25	1.5%
Insurance		$ -	$ -	
			$ -	
			$ -	
			$ -	
			$ -	
Subtotal Project Development Costs	$ -	$ 605	$ 605	37.0%
	Amount $000	% of Proj. Dev.		
Contingency, Amount + % of above		5.0%	$ 30	
Sub-Total Development Costs, with Contingency			$ 635	38.8%
	Amount $000	% of Proj. Dev.		
Sales Tax, % of above	$ 1,000		$ 1,000	61.2%
Sub-Total Development Costs, w/ Taxes & Contingency			$ 1,635	

Loan Guarantee Fee

The Loan Guarantee Fee is part of the Construction Financing costs located in the Project Finance section of Table 1 Wind Global Inputs. If the user elects to have the Loan Guarantee Fee assigned to one of the partners, this assignment occurs in cells W109:Z109 in the same section. Simply click the radio button next to the partner who is guaranteeing the loan and is taking a fee for that service.

Figure 35 – Table 1 Wind Global Inputs – Loan Guarantee Fee



Construction Financing (8 months)						
(all figures are in $000)		For Senior Debt	For Bridge Debt			
Percent of Borrowed Funds		100.0%	0.0%			
Construction Senior Debt			Developer	Tax Investor	Other	
	Rate or Factor	Total Project	100% Share			
As-Spent Amount Financed		$ 8,020	$ 8,020	$ -	$ -	
Interest Rate and Amount	8.00%	$ 212	$ 212	$ -	$ -	
Loan Commitment Fee	1.00%	$ 28	$ 28	$ -	$ -	
One Year Interest Rate Swap Premium		$ -	$ -	$ -	$ -	
Total		$ 8,259.2	$ 8,259.2	$ -	$ -	
Construction Equity Bridge Debt			100% Share			
As-Spent Amount Financed		$ -	$ -	$ -	$ -	
Interest Rate and Amount		$ -	$ -	$ -	$ -	
Loan Commitment Fee		$ -	$ -	$ -	$ -	
Loan Guarantee Fee		$ -	$ -	$ -	$ -	
Guaranteed by:		$ -	$ -	$ -	$ -	
Developer	Tax Investor	Other	Other			

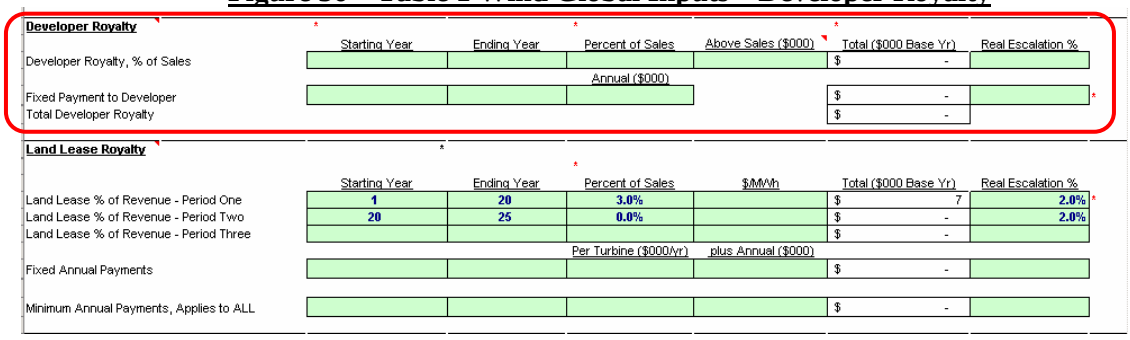
Deductible Guaranteed Payments

The model provides for two types of deductible guaranteed payments, Developer Royalty and Guaranteed Return on Capital. These payments can occur in multiple years of the project and are hence ongoing and deductible from the partnership taxable income in the year that the payments occur.

Developer Royalty

The Developer Royalty payment is found in the Project Revenue and Operating Expenses section on Table 1 Wind Global Inputs. If the user elects to have the Developer Fee assigned to one or more of the partners, this assignment occurs in cells AA68:AA70 in the Project Finance section on Table 1 Wind Global Inputs.

Figure 36 – Table 1 Wind Global Inputs – Developer Royalty



Developer Royalty	Starting Year	Ending Year	Percent of Sales	Above Sales ($000)	Total ($000 Base Yr)	Real Escalation %
Developer Royalty, % of Sales					$ -	
			Annual ($000)			
Fixed Payment to Developer					$ -	
Total Developer Royalty					$ -	

Land Lease Royalty	Starting Year	Ending Year	Percent of Sales	$/MWh	Total ($000 Base Yr)	Real Escalation %
Land Lease % of Revenue - Period One	1	20	3.0%		$ 7	2.0%
Land Lease % of Revenue - Period Two	20	25	0.0%		$ -	2.0%
Land Lease % of Revenue - Period Three					$ -	
			Per Turbine ($000/yr)	plus Annual ($000)		
Fixed Annual Payments					$ -	
Minimum Annual Payments, Applies to ALL					$ -	

Guaranteed Return on Capital

Near the top of Table 1P there is a table to provide any partner a Guaranteed Return on Capital. In this table the user can specify the percent of initial capital invested that will be returned to the partner each year for the years specified. The guaranteed return on capital differs from a preferred return in that the guaranteed return on capital does not affect the partner's capital account. The payment is taxable to the partner receiving the Guaranteed Return and may be taxable as self-employment income depending on the partner's situation.

Figure 37 – Table 1P Partner Returns – Guaranteed Return on Capital

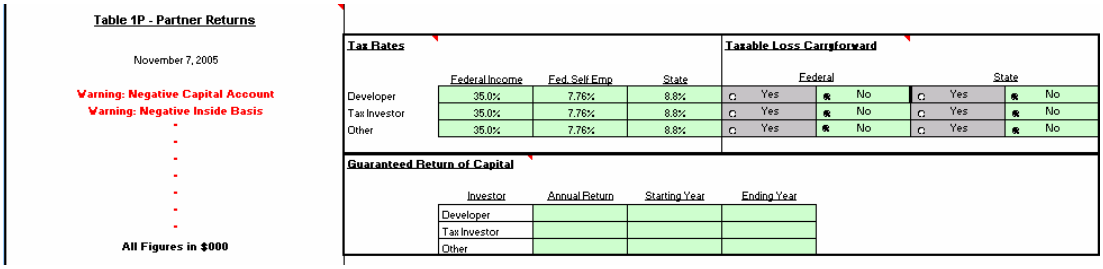


Table 1P - Partner Returns

November 7, 2005

Warning: Negative Capital Account
Warning: Negative Inside Basis

All Figures in $000

Tax Rates

	Federal Income	Fed. Self Emp	State
Developer	35.0%	7.76%	8.8%
Tax Investor	35.0%	7.76%	8.8%
Other	35.0%	7.76%	8.8%

Taxable Loss Carryforward

	Federal		State	
Developer	○ Yes	● No	○ Yes	● No
Tax Investor	○ Yes	● No	○ Yes	● No
Other	○ Yes	● No	○ Yes	● No

Guaranteed Return of Capital

Investor	Annual Return	Starting Year	Ending Year
Developer			
Tax Investor			
Other			

8) Glossary

Most definitions from IRS Publication 541, except where noted

Capital Account

A capital account represents the equity that a partner has in the partnership. The Capital Account tracks the partner's contributions, distributions, and the distributive share of income. Each year these capital accounts will change depending on the language of the partnership agreement, and how they will share in the profits and losses, and receive distributions.

Capital Account Maintenance

If partnerships make special allocations of income or distributions then each partner might have to take special care to keep a positive balance in their capital account. A partnership does not have to maintain book capital accounts in this manner, but might be required to by a creditor. Moreover, if special allocations are made, there is a higher risk that upon audit these allocations will not be respected. Account maintenance is another item that should be covered in a partnership agreement.

Inside Basis (Adjusted Basis) of Partner's Interest

The initial basis of a partnership interest is the money the partner contributes, plus the partner's distributive share of income and the partner's assumption of partnership liabilities, minus any distributions and the partner's distributive share of losses. For example, if the partnership takes on non-resource project debt, the partner's assumption of that liability would the partner's share of the partnership capital.

A partner's distributive share of partnership loss is allowed only to the extent of the adjusted basis of the partner's partnership interest. The adjusted basis is figured at the end of the partnership's tax year in which the loss occurred, before taking the loss into account. Any loss that is more than the partner's adjusted basis is not deductible for that year. However, any loss not allowed for this reason will be allowed as a deduction (up to the partner's basis) at the end of any succeeding year in which the partner increases his or her basis to more than zero.

Partnership Liabilities

- A partner's basis in a partnership interest includes the partner's share of a partnership liability only if, and to the extent that, the liability:
    - Creates or increases the partnership's basis in any of its assets
        - The term “assets” includes capitalized items allocable to future periods, such as organization expenses.
    - Gives rise to a current deduction to the partnership
    - Is a nondeductible, non-capital expense of the partnership
- If a partner's share of partnership liabilities increases, or a partner's individual liabilities increase because he or she assumes partnership liabilities, this increase is treated as a contribution of money by the partner to the partnership.
- If a partner's share of partnership liabilities decreases, or a partner's individual liabilities decrease because the partnership assumes his or her individual liabilities, this decrease is treated as a distribution of money to the partner by the partnership.
- Assumption of liability. A partner or related person is considered to assume a partnership liability only to the extent that:
    - He or she is personally liable for it
    - The creditor knows that the liability was assumed by the partner or related person
    - The creditor can demand payment from the partner or related person
    - No other partner or person related to another partner will bear the economic risk of loss on that liability immediately after the assumption.

Guaranteed Payment

- Guaranteed payments are those made by a partnership to a partner that is determined without regard to the partnership's income. A partnership treats guaranteed payments for services, or for the use of capital, as if they were made to a person who is not a partner. This treatment is for purposes of determining gross income and deductible business expenses only. For other tax purposes, guaranteed payments are treated as a partner's distributive share of ordinary income. Guaranteed payments are not subject to income tax withholding.
- The partnership generally deducts guaranteed payments as a business expense.
- Guaranteed payments made to partners for organizing the partnership or syndicating interests in the partnership are capital expenses and are not deductible by the partnership. However, these payments must be included in the partners' individual income tax returns.
- Guaranteed payments are included in income in the partner's tax year in which the partnership's tax year ends.
- If guaranteed payments to a partner result in a partnership loss in which the partner shares, the partner must report the full amount of the guaranteed payments as ordinary income. The partner separately takes into account his or her distributive share of the partnership loss, to the extent of the adjusted basis of the partner's partnership interest.

Cash Distribution

- Partnership distributions include the following.
    - A withdrawal by a partner in anticipation of the current year's earnings
    - A distribution of the current year's or prior years' earnings not needed for working capital
    - A complete or partial liquidation of a partner's interest
    - A distribution to all partners in a complete liquidation of the partnership

- A partnership distribution is not taken into account in determining the partner's distributive share of partnership income or loss. If the partner recognizes any gain or loss from the distribution, it must be reported on his or her return for the tax year in which the distribution is received. Money or property withdrawn by a partner in anticipation of the current year's earnings is treated as a distribution received on the last day of the partnership's tax year.
- A partner's adjusted basis in his or her partnership interest is decreased (but not below zero) by the money distributed to the partner
- A partnership generally does not recognize any gain or loss because of distributions it makes to partners.
- A partner generally recognizes gain on a partnership distribution only to the extent any money included in the distribution exceeds the adjusted basis of the partner's interest in the partnership. Any gain recognized is generally treated as capital gain from the sale of the partnership interest on the date of the distribution.

Partner's Income or Loss

- A partner's income or loss from a partnership is the partner's distributive share of partnership items for the partnership's tax year that ends with or within the partner's tax year.

Self-Employment Income and Taxes

- A partner is not an employee of the partnership. The partner's distributive share of ordinary income from a partnership is generally included in figuring net earnings from self-employment. However, a limited partner generally does not include his or her distributive share of income or loss in computing net earnings from self-employment. This exclusion does not apply to Guaranteed Payments made to a limited partner for services actually rendered to or on behalf of a partnership engaged in a trade or business.
- If an individual partner has net earnings from self-employment of $400 or more for the year, the partner is liable for self-employment tax...

Distributive Share

- Generally, the partnership agreement determines a partner's distributive share of any item or class of items of income, gain, loss, deduction, or credit. However, the allocations provided for in the partnership agreement or any modification will be disregarded if they do not have substantial economic effect. If the partnership agreement does not provide for an allocation, or an allocation does not have substantial economic effect, the partner's distributive share of the partnership items is generally determined by the partner's interest in the partnership.

Substantial Economic Effect

- An allocation has substantial economic effect if both of the following tests are met.
    - There is a reasonable possibility that the allocation will substantially affect the dollar amount of the partners' shares of partnership income or loss independently of tax consequences
    - The partner to whom the allocation is made actually receives the economic benefit or bears the economic burden corresponding to that allocation

Partner's Interest in Partnership

- If a partner's distributive share of a partnership item cannot be determined under the partnership agreement, it is determined by his or her interest in the partnership. The partner's interest is determined by taking into account all the following items
    - The partners' relative contributions to the partnership
    - The interests of all partners in economic profits and losses (if different from interests in taxable income or loss) and in cash flow and other nonliquidating distributions
    - The rights of the partners to distributions of capital upon liquidation

External Partner Taxable Income (CEI Definition)

- The partner’s taxable income base from interest outside this wind power project, which would allow the partner to utilize any taxable loss or tax credit in the year in which it is earned.

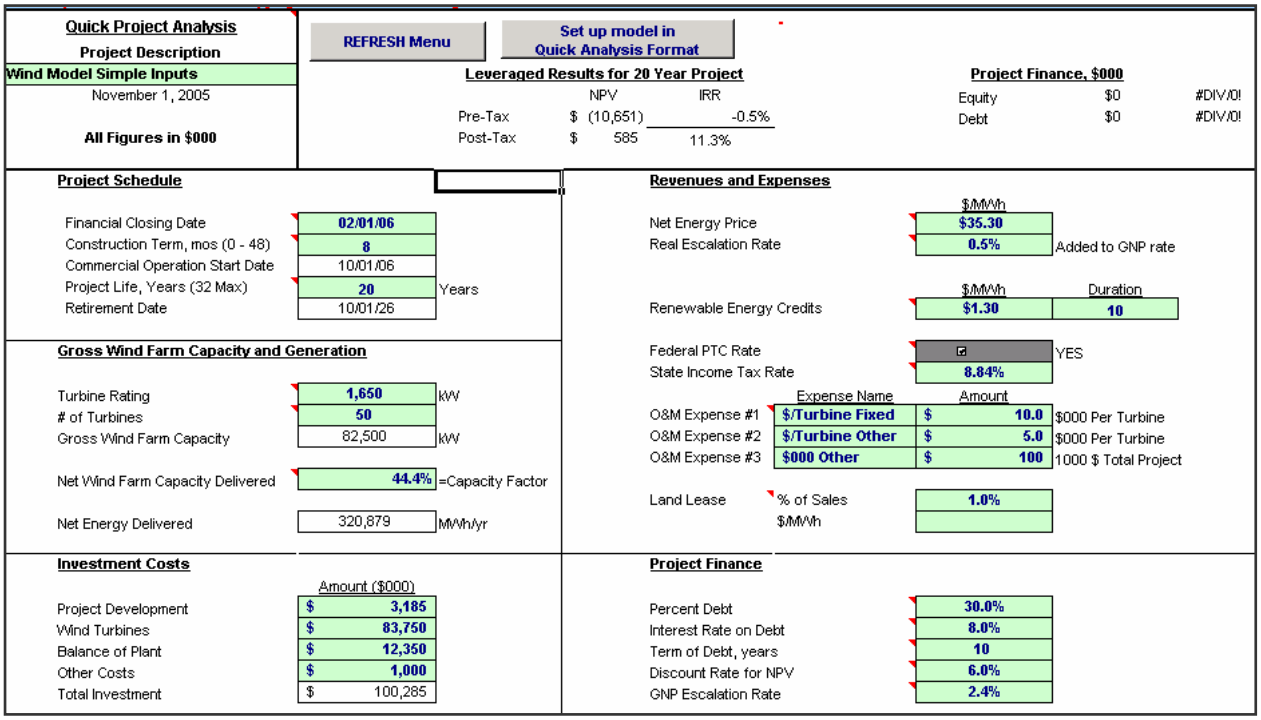
E) Table 1Q – Quick Project Analysis

This table is used to quickly analyze a wind power project, by only focusing on set of economic inputs to model a project. Simply entering values on this table is insufficient to perform a quick analysis. The `user must go to the Utilities menu, and select

"Set up Model in Quick Project Analysis Format"

Once you select this option, Table 1Q is linked into the rest of the model. You can run sensitivities and also modify the other inputs sheets to enhance your analysis.

Figure 38 - Table 1Q Quick Project Analysis


Quick Project Analysis
Project Description
Wind Model Simple Inputs
November 1, 2005
All Figures in $000
REFRESH Menu
Set up model in Quick Analysis Format
Leveraged Results for 20 Year Project
NPV
IRR
Pre-Tax $ (10,651) -0.5%
Post-Tax $ 585 11.3%
Project Finance, $000
Equity $0 #DIV/0!
Debt $0 #DIV/0!
Project Schedule
Financial Closing Date 02/01/06
Construction Term, mos (0 - 48) 8
Commercial Operation Start Date 10/01/06
Project Life, Years (32 Max) 20 Years
Retirement Date 10/01/26
Gross Wind Farm Capacity and Generation
Turbine Rating 1,650 kW
# of Turbines 50
Gross Wind Farm Capacity 82,500 kW
Net Wind Farm Capacity Delivered 44.4% =Capacity Factor
Net Energy Delivered 320,879 MWh/yr
Investment Costs
Amount ($000)
Project Development $ 3,185
Wind Turbines $ 83,750
Balance of Plant $ 12,350
Other Costs $ 1,000
Total Investment $ 100,285
Revenues and Expenses
$/MWh
Net Energy Price $35.30
Real Escalation Rate 0.5% Added to GNP rate
$/MWh Duration
Renewable Energy Credits $1.30 10
Federal PTC Rate YES
State Income Tax Rate 8.84%
Expense Name Amount
O&M Expense #1 $/Turbine Fixed $ 10.0 $000 Per Turbine
O&M Expense #2 $/Turbine Other $ 5.0 $000 Per Turbine
O&M Expense #3 $000 Other $ 100 1000 $ Total Project
Land Lease % of Sales 1.0%
$/MWh
Project Finance
Percent Debt 30.0%
Interest Rate on Debt 8.0%
Term of Debt, years 10
Discount Rate for NPV 6.0%
GNP Escalation Rate 2.4%

Project Schedule

The first section at the top left of Table 1 is the Project Schedule, where the user specifies the start of the project (Financial Closing Date), the duration of the installation (Construction Term), and the Project Life. In addition, in the section the user can segment the project life into multiple terms, specifically for PPA or different revenue pricing.

Gross Wind Farm Capacity and Generation

The next section offers entries for the rating of the Wind turbines to be installed, the number of turbines, and the Net Wind Farm Capacity. The Net Energy Delivered is calculated and shown below the entries.

Investment Costs
Next, the Investment Costs offer entries in ($000) for Project Development, Wind Turbines, Balance of Plant, and Other Costs. The sum of these entries is shown below the green cells.

Revenues and Expenses
The top-right section contains the inputs for revenues and costs. As this sheet is for a quick analysis, there is only one energy price that can be escalated separately from the expenses. Note this escalation rate, like most on Table 1, are additive to the GNP rate. Next, there is an entry for any Renewable Energy Credits (RECs), and also the duration in years for the RECs.

Below the RECs is a Check box to include Production Tax Credits (PTC). The PTC value is automatically defined per current legislation. Each year CEI will update the current year value to be used, as well as the escalation.

Next, there are three options for operating expenses. The first two options are expenses on a Per Turbine basis, and the third option is an annual amount. All three entries are user-defined. The last operating expense is the Land Lease, which can be entered as a percent of Sales or a dollar per MWH.

Project Finance
Keeping the financing options simple, the entries are straight forward.

IX) Saving EconExpert-WIND Spreadsheets

A) Saving "Fully Functional" Copies of the Model

During the term of your license you may save and reuse installed copies of fully functioning EconExpert-WIND models as you would save any other Excel Spreadsheet. To do so, simply use the Excel **Save** or **Save As** selections on the Excel Command Menu. The Spreadsheets you save will only work on computers that have authorized installations of EconExpert-WIND. If a saved copy of EconExpert-WIND is provided to other parties who do not have a valid license, they will be prompted to contact CEI to obtain License Codes to enable the model. By entering these codes, the models you send them can be fully enabled, and users who receive and license EconExpert-WIND from files shared by others will experience the same full functionality of the model as you will. Without the appropriate codes, transferred copies of the model will not function properly unless they are converted to a "Values-Only" using the EconExpert-WIND Command Menu. "Values-Only" copies will function on any computer, but are limited to providing the results for the individual case studied when the model was converted.

Please note that the copyright provisions of your license expressly prohibit you from providing your original Installation Copy of EconExpert-WIND to others. Your name and license number are stamped on the model. It is also important to note that when you perform a Save, EconExpert-WIND will be temporarily disabled showing **Div!/0** results throughout the various tables. The Input Sheet Titles will also disappear. This is normal behavior that is caused by a Security Feature in EconExpert-WIND that is intended to prevent use of the model by unauthorized persons. During your license period, if you always select the Enable Macros option when you open EconExpert-WIND, you will always be able to clear this Div!/0 result by selecting ENABLE MODEL from the EconExpert-WIND Command Menu. If Macros are NOT enabled, you will not be able to remove the Div!/0 result.

After saving the model, to eliminate the **Div!/0**s and re-enable the model select:

ENABLE MODEL Enable [Filename]

from the Command Menu. If multiple copies of EconExpert-WIND are opened, the menu will apply to the most recent version for which it was refreshed. If you have multiple instances of the model opened, the menu can be synchronized with the active version by selecting the Refresh Menu button that appears at the top of each sheet.

B) Creating a "Values-Only" Copy of the EconExpert-WIND model

From the UTILITIES MENU or EconExpert Help Menu, you can create a "Values-Only" copy of the current EconExpert-WIND model to archive or for sharing with others who may not be licensed to use EconExpert-WIND. The "Values-Only" copy that this module creates, will work on any computer but will have limited functionality. No special license codes will be required to view the "Values-Only" copy on any PC but the "Values-Only" model will not be capable of performing any new calculations.

Since the Sensitivity Cases included with a "Values Only Copy" cannot be updated after the model is converted, you will be offered the option to run all of the Sensitivity Cases and Tornado Diagrams prior to the conversion. If you decline this option, the Tables on the Sensitivity Sheet, Tornado Diagrams and Sensitivity Graphs will be deleted to ensure that the "Values-Only" copy does not contain Sensitivity Cases that are inconsistent with the case provided. Depending on the speed of your computer, running all of the Sensitivity Cases as a batch should take between 1 and 3 minutes.

Prior to executing a "Values-Only" conversion, you will be prompted with a number of Warnings, advising you to save the results before making the conversion, and to save the "Values-Only" file to a new name. These Warnings are to ensure that you don't accidentally overwrite your original copy of the Fully Functioning model.

If desired, you can archive a "Values-Only" copy of the model that can be restored by a licensed user to a full working version of the model. To restore a full working version from a "Recoverable" "Values-Only" copy, use the Import option on the UTILITIES MENU.

Please be aware that under the terms of the Software License Agreement, all printed reports and copies of EconExpert-WIND must contain the original copyright notices.

X) Sensitivity Analyses

Note: In more recent versions of EconExpert-WIND, single case sensitivity graphs are included in a separate add-in module.

EconExpert-WIND is equipped with the capability to run automated sensitivity analyses on a variety of important project parameters. Parameters for which Sensitivity Analyses can be performed include:

- Capital Investment
- Electric Energy Sales
  - 8760 Hour Average (includes all periods listed below)
  - PPA 1
  - PPA 2
  - PPA 3
- Financing
  - Equity Percentage During Operations
  - Interest Rate During Construction
  - Interest Rate on Senior Debt
  - Interest Rate on Subordinated Debt
  - Term of Senior Debt
  - Term of Subordinated Debt
- Fixed O&M Expenses
  - All Fixed O&M Costs, including those listed below:
  - User Defined Category 1
  - User Defined Category 2
  - Additional Fixed O&M
- Wind Farm Operations and Operating Cost Sensitivities
  - Wind Rating Profile
  - Energy Production and Wind Farm Capacity Factor
  - Fixed Operations and Maintenance Expenses
  - Land Lease and Developer Royalty Payments
  - User Defined Additional Annual Expenses (in Table 1C)
  - Variable Operations and Maintenance Expenses
- Production Tax Credits
  - Annual Amount of Federal PTCs
  - Escalation Rate of Federal PTCs
- Revenue
  - Green Tags / Renewable Energy Credits
  - Additional Annual Revenues (in Table 1 and Table 1C)

The SENSITIVITIES Menu provides you with the ability to run these sensitivity cases either individually, or as a group, and to report how the project's Internal Rate of Return (IRR) will be impacted by variations in these parameters. You can specify the term (in years) of the IRR Analysis that is used in the Sensitivities by entering the desired number of years in the third column of the IRR Summary Table at the top of Table 1. The location of the entry is identified by the red bold-faced title

TERM USED FOR SENSITIVITY.

A) Setting the Term

You can specify the term (in years) of the IRR and NPV Analyses that are used in the Sensitivities by entering the desired number of years in the third column of the NPV and IRR Summary Tables at the top of Table 1. The location of the entry is identified by the red bold-faced title **IRR TERM FOR SENSITIVITY STUDIES** as shown in Figure 19 below:

Figure 39 – Table 1 Wind Global Inputs - The IRR Sensitivity Term

After-Tax IRR End-of-Year			TERM USED FOR SENSITIVITIES	
Years	6	10	20	
Leveraged	6.18%	12.59%	15.94%	
Unleveraged	1.82%	9.94%	12.83%	

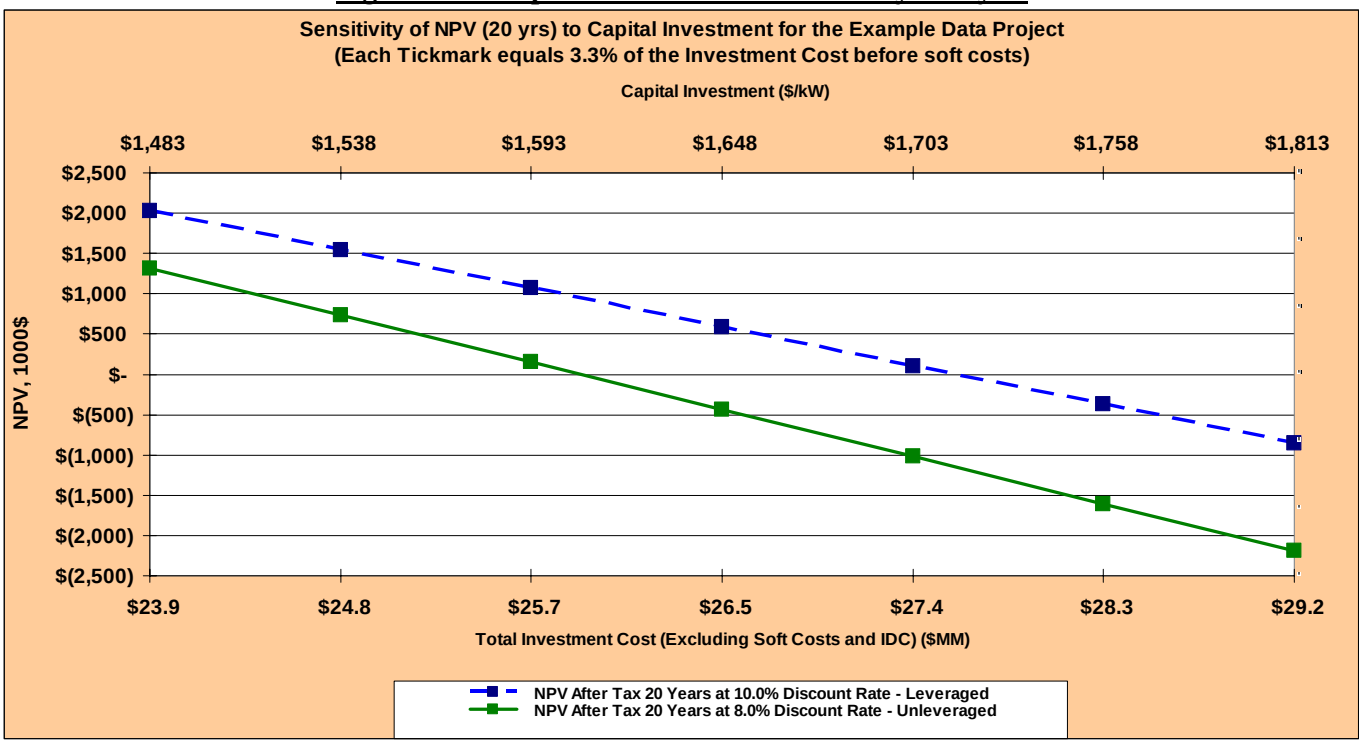
B) Sensitivity Increments

Sensitivity Analyses in EconExpert-WIND are executed by incrementing the selected variable over a range of values that can be defined by the user. The Sensitivity Increment is used to define the range, by iterating the model over 7 intervals, from the base case value minus three times the Increment to the base case value plus three times the Increment. When you run a Sensitivity Analysis, you will be prompted to enter the respective Increment to be used. If you run all of the Sensitivities as a batch, you will be advised of the current values and asked if you want to use them or change them manually in the Sensitivity Sheet.

So, for example, when performing a Sensitivity Analysis on the Capital Investment Cost of the project, the user might specify a Sensitivity Increment of 5%. Econ Expert will then iterate the model using values of 85%, 90%, 95%, 100%, 105%, 110% and 115% of the Capital Cost used for the current case, and will then report in tabular and graphic format how the project's IRR will vary as a function of the resulting changes in the Total Investment Cost (including Development Costs, Capital Costs, Soft Costs and Interest During Construction). The Sensitivity Increment can also be specified in a cell in the Capital Cost Sensitivity Table.

After executing a Sensitivity Analysis, the user will be taken to the resulting graph that illustrates how the project IRR is impacted by changes in the selected variable. A sample of that graph is shown on the next page.

Figure 40 - Graphs Produced from Sensitivity Analyses



Important Notes regarding Sensitivities:

- Sensitivity analyses are performed for a specific case in the model, showing upside and downside variations relative to the current case. If Inputs to Table 1 or Table 1C are changed, the current sensitivity cases may need to be updated to reflect the new case.

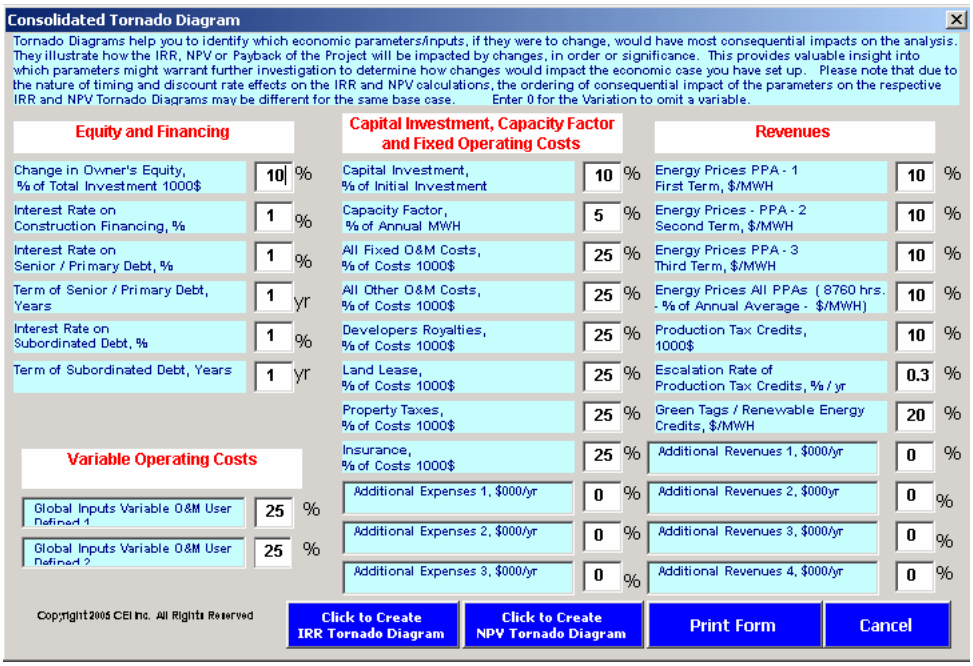
- The formatting of Charts (or Graphs) in Excel may require adjustments as the values that are charted are changed. You may also want to customize a Chart. To modify or customize a Chart created by EconExpert-WIND, first Disable Range Protection using the UTILITIES Menu. Then click on the appropriate Chart to view / edit the Excel Chart Options. After finishing it is recommended that you re-enable the Range Protection. For Help on formatting Excel Charts, use Microsoft Excel Help and search for "CHARTS".

C) Tornado Diagrams

The SENSITIVITIES Menu also provides you with options to generate Tornado Diagrams. While the individual Sensitivities on this menu allow you to selectively study effects of changes individual inputs, Tornado Diagrams illustrate how the NPV or IRR of the current case will be impacted by individually incrementing multiple inputs. Each of the respective Tornado Diagrams is generated by varying the inputs for the life of the project, based on inputs to either Table 1 or Table 1C.

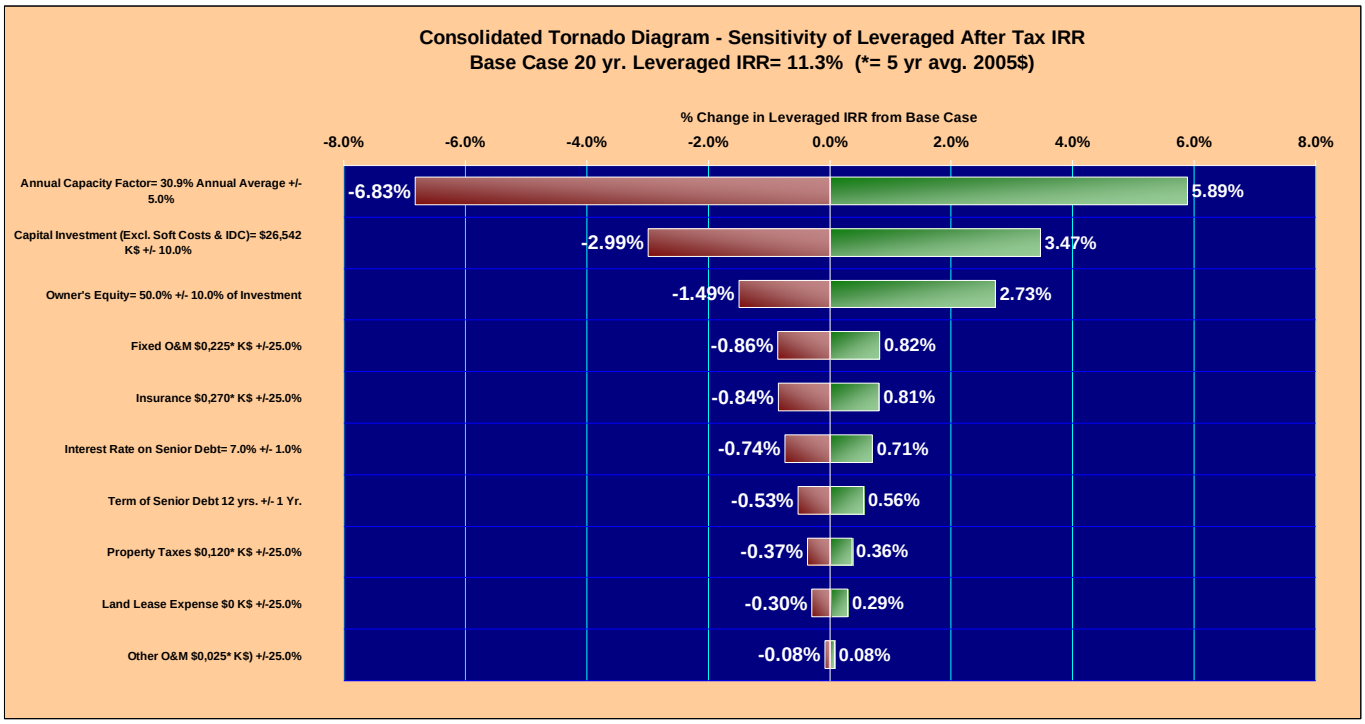
The Sensitivity Sheet is used to generate the tables used for the Tornado Diagrams. The Increments used for the Tornado Diagrams are entered in the Data Input Sheet that is opened when you select the respective Tornado Diagram from the SENSITIVITIES Menu. An example of the Data Input Sheet that will be opened is provided below.

Figure 41 - Tornado Diagrams Data Input Sheet


Consolidated Tornado Diagram
Tornado Diagrams help you to identify which economic parameters/inputs, if they were to change, would have most consequential impacts on the analysis. They illustrate how the IRR, NPV or Payback of the Project will be impacted by changes, in order or significance. This provides valuable insight into which parameters might warrant further investigation to determine how changes would impact the economic case you have set up. Please note that due to the nature of timing and discount rate effects on the IRR and NPV calculations, the ordering of consequential impact of the parameters on the respective IRR and NPV Tornado Diagrams may be different for the same base case. Enter 0 for the Variation to omit a variable.
Equity and Financing
Change in Owner's Equity, % of Total Investment 1000$ 10 %
Interest Rate on Construction Financing, % 1 %
Interest Rate on Senior / Primary Debt, % 1 %
Term of Senior / Primary Debt, Years 1 yr
Interest Rate on Subordinated Debt, % 1 %
Term of Subordinated Debt, Years 1 yr
Variable Operating Costs
Global Inputs Variable O&M User Defined 1 25 %
Global Inputs Variable O&M User Defined 2 25 %
Capital Investment, Capacity Factor and Fixed Operating Costs
Capital Investment, % of Initial Investment 10 %
Capacity Factor, % of Annual MWH 5 %
All Fixed O&M Costs, % of Costs 1000$ 25 %
All Other O&M Costs, % of Costs 1000$ 25 %
Developers Royalties, % of Costs 1000$ 25 %
Land Lease, % of Costs 1000$ 25 %
Property Taxes, % of Costs 1000$ 25 %
Insurance, % of Costs 1000$ 25 %
Additional Expenses 1, $000/yr 0 %
Additional Expenses 2, $000/yr 0 %
Additional Expenses 3, $000/yr 0 %
Revenues
Energy Prices PPA - 1 First Term, $/MWH 10 %
Energy Prices - PPA - 2 Second Term, $/MWH 10 %
Energy Prices PPA - 3 Third Term, $/MWH 10 %
Energy Prices All PPAs (8760 hrs. - % of Annual Average - $/MWH) 10 %
Production Tax Credits, 1000$ 10 %
Escalation Rate of Production Tax Credits, % / yr 0.3 %
Green Tags / Renewable Energy Credits, $/MWH 20 %
Additional Revenues 1, $000/yr 0 %
Additional Revenues 2, $000/yr 0 %
Additional Revenues 3, $000/yr 0 %
Additional Revenues 4, $000/yr 0 %
Copyright 2005 CEI Inc. All Rights Reserved
Click to Create IRR Tornado Diagram
Click to Create NPV Tornado Diagram
Print Form
Cancel

The white boxes in this sheet are the locations where you tell EconExpert-WIND over what +/- range ("Increment") that you would like the model to vary each of the specified inputs. Once you have established the Increments, select either the IRR or NPV buttons to generate the selected Tornado Diagram. After selecting this button, the following diagram will be generated:

Figure 42 - Example Tornado Diagram



The horizontal bars illustrate how +/- changes in the identified inputs would impact the project's IRR. The results are sorted in order of significance, giving the "Tornado" effect. Note that the titles on the left axis identify the base case leveraged and unleveraged IRRs, the Base Year $ value for the input, and the Increment that was used.

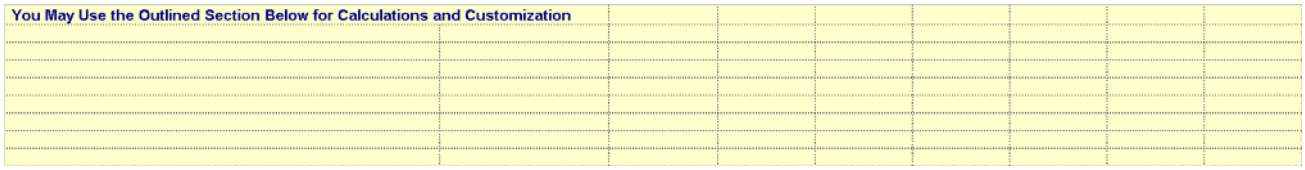
XI) Customizing EconExpert-WIND

One of the many advantages of EconExpert-WIND is the flexibility it offers allowing you to accurately custom model virtually any power generation project. While the core tables in the model are locked and cannot be modified by the user, in the vast majority of cases, custom analysis can be accomplished using a combination of EconExpert-WIND's Global and Annual Inputs Sheets, Tables 1 and 1C. In addition to entering values into these cells, formulas may also be entered. These formulas can be tied to other cells in the model or to custom tables that you develop. Useful approaches for customizing the model include:

Free-Form Sections

At the bottom of each sheet, a blank unprotected area (formatted as Yellow Cells), is provided where you can develop your own custom calculations. In these areas you can set up your own tables, which can be linked to other tables and calculations in the model.

Figure 43 - Example of Areas as the Bottom of Each Sheet for Custom Calculations



You can select the format of cells in these tables using the:

UTILITIES **Reformat Cells**

option on the EconExpert-WIND Command Menu, which allows you to select various number, $ or percentage formats.

New Sheets

You can also insert a new sheet into the model. To do this, right click on any of the Sheet Tabs and select:

Insert Worksheet

from the Excel “right-click” menu.

To take best advantage of customization, link your custom formulas to Annual Inputs in Table 1C. Utilize the User-Defined Input Options for Revenues and Expenses. In this way, all of the functionality of the model will reflect your customization.

Note: Be careful not to create 'Circular Calculations' using these approaches

CEI also provides financial modeling and model customization services. For information please contact us at the address shown on the cover page of this manual.

Appendices

Overview of CEI's *EconExpert*™ Software Suite

Competitive Energy Insight (CEI), established in 1997, has developed a mature and highly advanced suite of software products for the analysis of project investments in renewable energy, central power stations, commodity liquid and gaseous products, and combined heat and power. We both license these models for your direct use, and use them broadly in our project development consulting practice serving as a bench to support your in-house team. All of the EconExpert tools are Excel-based, making them completely customizable, auditable and adding all of the features of Excel to EconExpert's powerful architecture. Importantly, they are far more than spreadsheets. Behind each EconExpert model is powerful Visual Basic programming that provides highly advanced menu/wizard driven functionality taking Excel and your analysis capability to a completely new level. Standardized, accurate and applicable from simple screening to bank quality analysis of virtually any project investment, acquisition or divestiture, EconExpert has been applied to literally billions of dollars of energy project investments including on-site generation applications, renewable energy projects and large multi-hundred million dollar central power station investments, including highly functional tax benefit monetization analysis. For more information on CEI and a list of many of our software and services clients please visit ***http://www.CEInsight.com***.

CEI's financial analysis suite includes the following (Click on links in ***blue*** to link to Flash Demos – your browser must already be opened):

1. ***EconExpert-EP*** for wholesale *Electric Power* including solar thermal, biofuel, landfill gas, fossil and thermal-based electric power projects.

2. ***EconExpert-WIND*** for wind farm projects that sell wholesale energy.

3. ***EconExpert-PV*** for wholesale / large solar *Photovoltaic* projects.

4. ***EconExpert-DG*** for *Distributed Generation* / combined heat and power, tariff analysis and energy savings applications that are "behind-the-meter".

5. ***EconExpert-CP*** for *Commodity Products* including ethanol, biodiesel, synthetic natural gas, refining and coal gasification / liquefaction applications, etc.

6. ***EconExpert-IAT*** the *Interval Analysis Tools* for WIND, PV and CHP, perform time-of-production analysis of energy sales as a function of interval energy prices, demand/load profiles, hourly ambient weather conditions and facility operating characteristics.

7. ***EconExpert-Electronic Databook*** for integrated analysis of multiple scenarios or applying multiple EconExpert models. With this tool users can easily perform tasks like portfolio analysis, comparisons of complex and distinct scenarios, contracting analysis and risk analysis integrating one or more of the EconExpert models described above.

A schematic of the software suite is provided on page 93.

The EconExpert® Modeling Suite

Renewables or Fossil

Vertical	Load Profile Database	Interval Analysis	Financial Models
Electric Power • Biomass • Wind • Solar (CSP or PV) • Land Fill Gas • Coal / IGCC			EconExpert EP
		EconExpert WIND-IAT	EconExpert WIND
		EconExpert PV - IAT	EconExpert PV
Retail / Behind the Meter • Digester Gas • Solar PV • Small Wind • Fuel Cells	EconExpert EnergyShape	EconExpert IAT	EconExpert DG
Commodity Products • Ethanol • Biodiesel • Hydrogen • Refining			EconExpert CP
Portfolios and Scenarios		Electronic Data Book EconExpert EDB	

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Fax: (858) 566 - 0287

Email: Info@CEInsight.com
Website: http://www.CEInsight.com

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